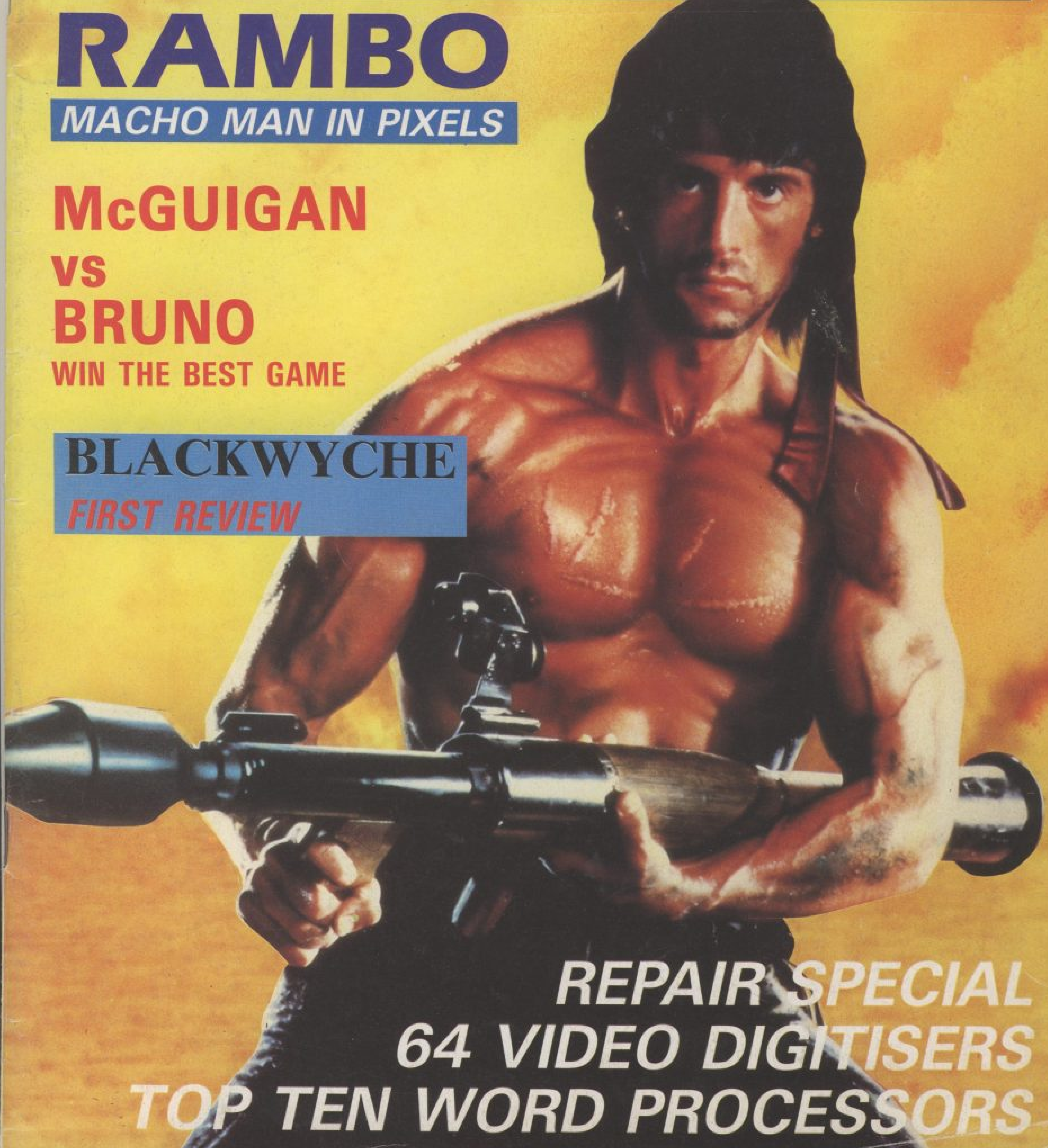
COMMODORE user

October 1985

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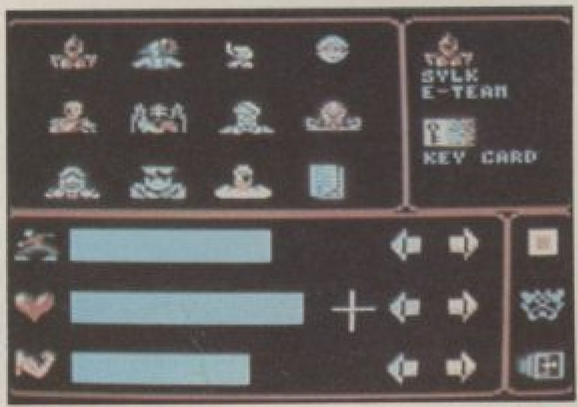
OCTOBER

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COMMODORE ANNOUNCE 128 SOFTWARE

Commodore breathed sighs of relief when its C-128 was finally launched to the public at last month's Personal Computer World Show.

Having stuck their corporate necks out by announcing earlier than scheduled delivery dates, an unexpected problem with the CP/M implementation seems to have held things up. Reportedly, all is now hunky dory and machines are not only rolling off the lines at Corby, but substantial amounts of software are being developed.

Packaged up with every 128 (and 64) will be the *Very First* disk, a tutorial and demo program aimed at the first-time user. *Mandroids* is Commodore's first 128 game. It's disk-only like all Commodore 128 software. You construct a robot to undertake a series of missions (rather like Ariolasoft's Mail-Order Monsters). Graphically it's like the 64, but the extra memory gives you many more graphic screens.

For 'serious' users, Commodore is marketing 'budget' versions of both Superscript and Superbase. Script-128 is Superscript without the glossary and spelling checker. The cutdown Superbase will not have the original's programming functions. Both should cost around £50. An Assembler package is also on the way.

Small business users get a package called *Micro Clerk*, a cashbook and VAT program that conforms to Inland Revenue standards. It has a basic database and word processor for generating mailing lists. Features include a 40 or 80 column screen and pop-up menus. Not cheap at around £90, it does give you a hot-line service to an accountant (free for the first three months) who'll advise not only on the software but financial problems. Sounds like a good idea.

For the musically minded, Music Sales has announced a 128 version of Commodore Music Maker for the 128. Like the 64 version, there's an overlay keyboard, booklet and software on tape or disk. Enhancements to the original will include better sequencer and rhythm section, more sound presets and pop-up menus — all that for £19.95. Two more Playalong Albums will also be available soon, one's a Christmas carol collection, whilst the other features Duran Duran songs.

And back to Commodore, for a few words on disk drives. Acknowledging that the 1571 drive (for the 128) may be too expensive at £250, a single-sided version is being planned as an option. Likewise, the Plus/4 will get a go-faster drive, the 1551, that will be packaged up in a 'limited edition' Plus/4 Business Pack (computer, monitor, disk drive, printer).

EUREKA! PRIZE CLAIMED



The worldwide scramble to discover the cryptic telephone number that stood betwen players of *Eureka!*, Domark's prize adventure, is over.

Fifteen year old Mathew Woodley telephoned the Eureka prize line to claim his £25,000 exactly a year after the competition began. He beat over 100,000 people in Britain and Europe who had bought the game.

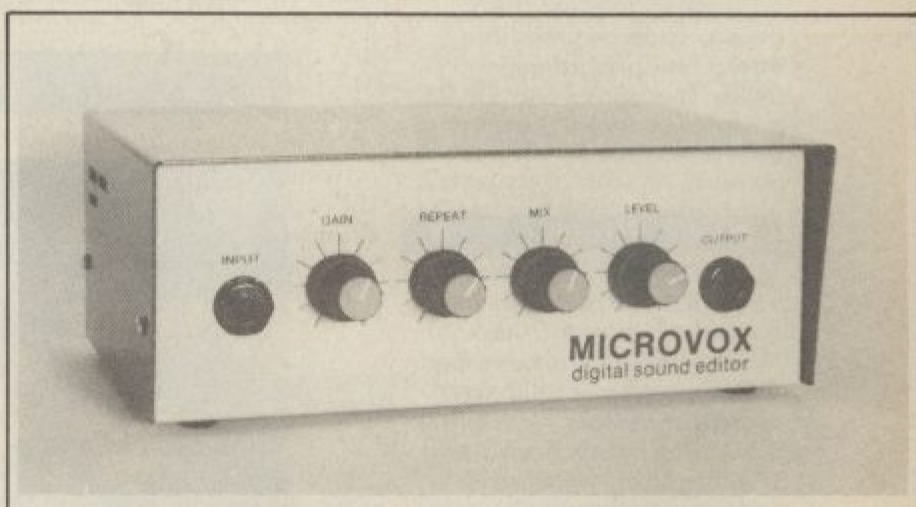
Domark co-founder Mark Strachan presented Mathew with his cheque at the PCW show last month. Next issue's Into the Valley column will include the answers to the clues and the way to crack that telephone number so you'll know how close you got.

• Shorts •

Sneak Preview: Here's the lowdown on two amazing new 64 sound packages from Music Sales. *Sampler* is a digital sound sampling program (£69.95 with microphone) that's sophisticated enough for professional use. Effects include echo and reverse. More exciting is *Sound Expander*: at £99.95, it turns your 64 into an 8-note polyphonic synth (poor old SID is substituted by another chip). Features include a range of sound presets, split sound keyboard, MIDI and external keyboard input. We can't wait to get our hands on them.

• Shorts •

Cheap Assembler: McGraw Hill, more noted for its books about computing, has now published a Machine-Code Assembler/Disassembler for the Commodore 64. The good news is that it's on tape and costs only £14.75, so it should attract the budding m/c programmer. According to the blurb, the assembler and disassembler are fully compatible and can be in memory at the same time. Standard 6502 mnemonics are used. There's also a comprehensive 15-page booklet. McGraw-Hill can be contacted on 0628 23432.



Probably the most sophisticated sound digitiser yet for the 64 is Microvox from Supersoft which, according to boss Peter Calver produces sound "so good you really can't tell it from the real thing". Microvox features eight sampling rates, full editing and looping, MIDI and a load of hi-tech gizmos. And now for the price — er, £229.95. Supersoft is on 01-861 1166.

YOUNG BLOOD AT ORPHEUS



Orpheus, the company that brought fairies to your 64, has signed up a licensing deal to produce a game based on the antics of the Young Ones, the wickedly funny TV comedy.

Using an artificial intelligence module they developed themselves, Orpheus allow you to choose one character whilst the rest play themselves. The system also has a memory. Thus, if you're horrible to someone they'll remember it at a later date. So if you kick Neil and call him a smelly hippy, he may well not do your washing-up.

The game takes place partially in the grotty student house of the series, but also takes you outside as well. The comedy's script writers, Rik Mayall and Ben Elton, will be conferring with Orpheus on the game's development.

Release of the Young Ones is set for early October and it will sell for £7.95. Also on the way from Orpheus is *Tujad*, an arcade adventure which pits you against a computer controlling an orbiting fusion reactor which has malfunctioned.

• Shorts •

Books for boffins: Melbourne House has produced two new books that should fill a useful gap on the programmer's bookshelf. The *Commodore 64 Whole Memory Guide* is a complete memory map that not only gives all the locations but a detailed description of each one and how its used. For the specialised machine-code programmer there's the *6502 Reference Guide*, featuring information on the 6502 instruction set, addressing modes, flags, timing, code optimisation and a few programming tricks. The books cost £9.95 each. More details on 01-940 6064.

• Shorts •

Wackysoft: The wackiest software to appear at last month's Personal Computer World Show must have been CGM's series of bilingual word processors for the 64/128. There's Port-Star (Portuguese), Ital-Star (Italian), and Span-Star (Spanish). Also shown was Span-64 described as a "Spanish/English/Catalan Basic operating system". Por informacione contacte 01-636 4266.

THE BOOK AND THE GAME

Mighty book publishers, Macmillan, are combining books with software to produce a range called *The Professional Touch* for the Commodore 64.

World Cup Soccer (introduced by Ray Clemence) has a book giving tips on skill, technique and "the secrets of the world's greatest players". The tape has two programs: one lets you play at being a World Cup manager (can you do better than Bobby?); the other is a compendium of facts and figures on every World Cup match ever played — nice material to bore your mates with at half time.

Magic works in the same way. The book is a collection of tricks together with hints and tips on performing them. The tape performs 15 tricks, allowing you to rehearse and sequence them into a complete magic show — but you can't saw the computer in half.

Finally, there's *Screenplay*. The book gives "the inside story of authentic TV and film production techniques. When you've grasped all that, the software lets you create and animate characters, design scenery, write dialogue and compose a soundtrack. According to the blurb, the program can be transferred to videotape. Budding Speilbergs start here.

BASH THE DRUM



Feargal Sharkey was so impressed he bought one.

Many of today's Chart-bound sounds use drum machines instead of bashing the real things — so why shouldn't you? Problem solved. You can now get a software package caleld the *Digidrum* for your 64/128 that effectively turns it into a drum machine. An audio output links the device to an amplifier or headphones.

The software comes on cartridge and offers a range of standard sound sets: three types of tom tom, crash cymbal, open/closed hi-hat, snare and bass drum. There's a set of demo rhythm patterns but you can create and edit your own, copy and link them. That lot will cost you £65. A disk is also available (£16.50) that provides a set of forty new sound samples. We'll be reviewing Digidrum next month. Meanwhile, more details from Syndronic Music, 35a Grove Avenue, London N10 2AG.

NEW BOND GAME DUE!

Your 64 is set to become a madhouse with the release of a new game from Probe Software.

The game is a lighthearted jaunt with some of Russ Abbott's characters and is called the *Adventures of Bond . . . Basildon Bond*. Basildon Bond is the smooth talking idiot of a secret agent who pops up among Russ Abbott's other characters in the show like Cooperman and Blunderwoman.

The basic idea is for you to rescue the kidnapped Bond from a TV studio by searching the various rooms in the place and collecting a number of jokes which you have to piece together to proceed on to the next stage.

You face nasties in the form of roving television cameras which attempt to zap you. You combat them by collecting Cooperblasters which you fire at the cameras, launching the character who destroys them. Occasional dummy Coopermans will cause you to fire Blunderwoman instead, who sends things horribly wrong.

Probe have negotiated a deal with K-tel Records, whereby the instrumental of Russ's new single appears on the game while Probe are mentioned on the back of the record.



TERRORMOLINOS COMPETITION RESULTS

Well, we asked for it — your ideas for a humorous adventure to follow *Terrormolinos*. Over to the judges for the wacky results.

Runners-up first: Alan Dickey of Fulham for his "Trials and Tribulations of a would-be Vegetarian", Darren Fox of Bushey Heath for his post-night on the titles "Disprin Quest", also Mark Hancock of Swansea who'd like to see an adventure about, er, car thieves.

The winner — Dave and Tracey Howells of Bristol. The game? Here's a snippet — Kid Curry, the flatulent cowboy, must find the only loo in town. Only Cannibal Hayes can help him find and pull the golden loo chain he needs. Hmm, enough said. An evening out Espagnole awaits you.

• Shorts •

Basic Blitz: Good news for Basic speed freaks, the American *Blitz* Basic compiler is now being distributed in the UK by Supersoft. Although it's only available on disk, compiled programs can be saved to tape or disk. Blitz will also work with two single drives or a double-drive unit. The price? At £49.95, it's not exactly an impulse buy. Details on 01-861 1166.

• Shorts •

80 columns for 64: Tasman Software, who produced the megasuccessful *Tasword* word processor for the Spectrum and Amstrad, has now turned its attention to the 64. Not another 64 wp program, you groan. Not quite, this one prints 80 columns across the screen (it's all done in software). Get set for a review next month.

• Shorts •

Hyperforce: Sounds like a new game? Wrong. It's a combined compiler and extended Basic for the 64 from Argus Press Software. Claimed compiling speed is "up to forty times faster" whilst the extra Basic commands give greater control over graphics, sprites and sound. Both the disk and tape versions cost £19.95. Details on 01-439 0666.

• Shorts •

Slipped disk: Following our announcement that Cumana was working on a Commodore compatible disk drive comes the sad news that the company is pulling out of the project. According to a spokesman, a truly compatible drive would have infringed the copyright Commodore has on the DOS.

• Shorts •

Book for 128: Probably the first book (partially) for the 128 has appeared called the Commodore 64 and 128 Collection, it's published by Compute! and contains a whole load of articles and programs, some specifically for the 128. There's also introductory material on the 128, its CP/M and sound capabilities. At £12.95, though, it's not exactly cheap. More details from Holt Saunders on 0323 638221.

• Shorts •

Electrosound: Orpheus (the Megabase and Elidon people) have announced the Electrosound music package for the 64, claiming that it's sophisticated yet cheap. At £14.95 on tape and £17.95 on disk, it features the usual facilities, plus a 24-piece drum set and a sequencer. With so many packages to choose from, Electrosound's going to have a lot of competition. More info on 0767 51481.

• Shorts •

Mole is robbed: Commodore have nabbed Mosaic's first batch of Adrian Mole adventures. They are going to give it away free to new 64 buyers. But you can win one with *Commodore User* next month.

• Shorts •

World Cup Software: The UK Gold division of megasuccessful US Gold is set to make a name for itself with the official (and exclusive) Mexico '86 World Cup football game. It should be ready two weeks before the first whistle blows. For £8.95 you'll get an arcade-type game on tape and a program that lets you monitor World Cup results. Also thrown in is the official emblem and 'Pique', the Mexico '86 mascot.

• Shorts •

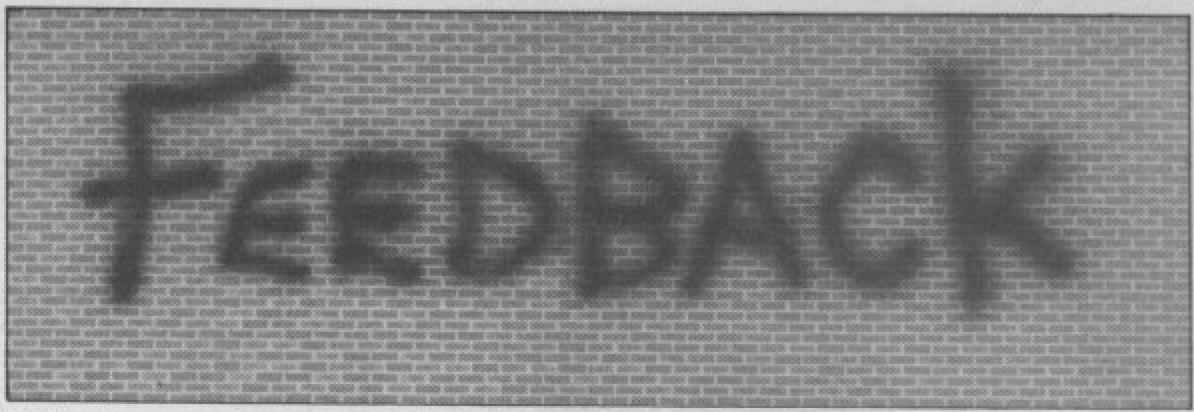
Double Paintbox: Hi-res graphics on the cheap from Audiogenic, the new Paintbox package costs just £9.95. A single tape includes both the 16 and 64 versions. Along with the usual drawing facilities comes the ability to save to both tape and disk. More details on 0734 664646.

• Shorts •

Commodore repairs: Bedford-based Zedem Computers just missed our roundup of Commodore repair specialists (this issue). They'll repair any Commodore home micro for a fixed fee of £27.95, or on a parts and labour basis. Depending on the availability of spares, it should take about two days to repair your machine. For more details on a quick fix, ring 0234 213645.

• Shorts •

Casualty Ward: Neatly packaged with a huge red cross on the cover comes Operation Caretaker, a cleaning and care utility for the 64. It contains two tapes: a tape head cleaner/demagnetiser and an azimuth alignment program. There's also a little screwdriver, indispensible for getting into that tiny hole in the datasette. The package is made by Global Software and costs £10.95. It should be available on the High Street. Global is on 01-228 1360.



Write to us and win yourself a T-shirt (S,M,L). Letters to: Feedback, Commodore User, 30-32 Farringdon Lane, London EC1R 3AU.

Cheat

Dear Commodore User,
While looking at my August issue of Commodore User, I noticed a program that looked familiar.

The program was called *Spy Eyes* and, sure enough, in a book, 'Computer Horror & Spy Games' by Usborne, there was a program exactly the same.

The only difference was the title and in the book there was no high score.

I do not think it is right for people to be paid for sending in something they copied out of a book.
Brian Turner,
Stockwood,
Bristol.

• We check most programs very carefully for quality and validity. Occasionally one slips through the net. All we can say to readers is don't plagiarise programs — this could be a contravention of copyright. What sense of achievement is there in getting something that's not yours published? Besides which, if we catch you, we'll break your legs!

Record Returns

Dear Commodore User,
I have just finished reading the August edition of Commodore User. On the letters page a M. Lofthouse from Blackburn writes to ask if he holds the record for returned 64's. He's on his seventh, "wow", not bad going in fact he beats me by two. At the end of this letter you asked for any more tales of woe, I certainly hope you get them, and then pass them on to Commodore.

I have had machines that refuse to power up, another had a faulty sound chip, it did not generate the bouncing ball sound on commie games such as football and basketball. Then another which had a loose cartridge port. Need I say more.

It's not only me that has had problems, one of my friends is on commie number three, and my father is also on commie number three. All of us have at some time or other had the powering up problem, where the screen goes blank and the cassette motor starts to run but it does not stop and the screen stays blank. Maybe Tommy could explain this.

All in all I think Commodore 64's are just plain terrible when it comes to hardware problems. But I do think that the 64 is an excellent computer and I have never regretted buying mine and would not even consider buying a computer made by another firm as Commie are about to release the perfect upgrade let's hope it's a bit more reliable than the 64.
Mark Jones,
Blackpool.

CBM Slur

Dear Commodore User,
I wonder if any C-16 readers have noticed this slur on CBM. In Microdeals '*Cuthbert in Space*', if you load the program, and when the opening screen comes up, enter the machine code monitor by pressing the Run/Stop and Reset button together. Next type M2728 and read the block on the right hand side of the screen. It reads *Buffer for failure type 43+ Bytes long CBM is trash.* Can Microdeal give an explanation for this abuse?

Being a staunch CBM supporter I am appalled that *Cuthbert in Space* can be sold to the general public bearing what could be seen as a slanderous message.



Cuthbert says "CBM is trash".

Evidently, the programmer is not a CBM fanatic. Does he/she not realise that it is because of CBM and similar companies that he/she has a job.

In my opinion the C-16 is the best box of 'chips' on the market today.
R.S. Mchafus,
Peterhead,
Aberdeenshire.

• We spoke to the programmer of *Cuthbert*, Steve Back, and he explained that his comment was not a slur on the 16 or the 64. It actually refers to the Commodore assembler he was using when he wrote the program. "That assembler is absolute trash. There's so many things wrong with it, I spent four hours trying to work out why Cuthbert kept crashing when I was writing it because of that thing." Needless to say Steve no longer uses it.

Golden Turkey

Dear Commodore User,
Some time ago I purchased a "Battle for Normandy" simulation. And for 2 months I fought my way through the lengthy instruction, I ventured into loading the tape. For 5 hours I pushed my troops up the beaches of Normandy, (up to my neck in muck and bullets) then I put the game onto "Save". What a mistake!

Firstly the game wouldn't play on, then the next day when I loaded in the saved game, it didn't display the British & American troop positions, which was fairly crucial! I expect Rommel would have been pleased!

Anyway, I sent the game back to 'US Gold' and they wrote back stating that, "there was no "Save" routine on the cassette version, the reason being "there is no cassette in the US and we had to specially convert a disk version to run on tape". "and the "Save" routine on the disk does not work on the tape version"? They stated that "this has only come to light after printing and marketing".

They apologised for any problems and enclosed some posters as a measure of regret. My 8-year-old son thought these were marvellous, but I was not impressed! They hadn't even mentioned the smaller map.

Also I asked about the screen display on the back of the box (the one with the high-res graphics) it's nothing like the game. They completely ignored this point about false advertising!

I think that their reply is disgusting for a company like US Gold. For nearly £15 a tape, this is a con. No wonder there are computer pirates.
F J Clarke,
Caterham,
Surrey.

• US Gold has a habit of slinging out stuff without checking it properly. There's no excuse for it all and we try to pre-warn people of this kind of thing in reviews.

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- Jack Attack (cartridge) ☐

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The first ten correct entries to reach our offices before the 20th of October will win the games listed.

Entries should be sent to Commodore User, Famous Names Game, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

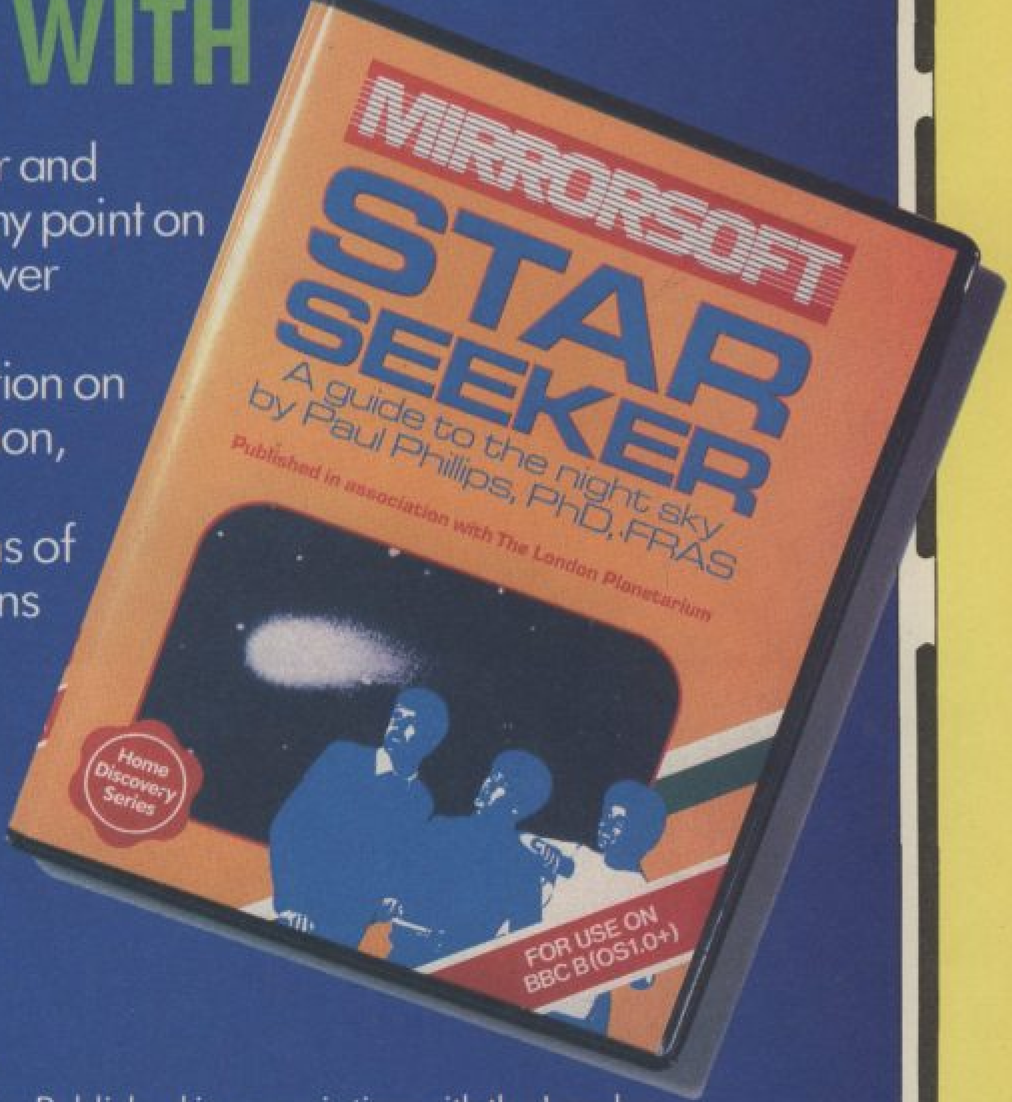
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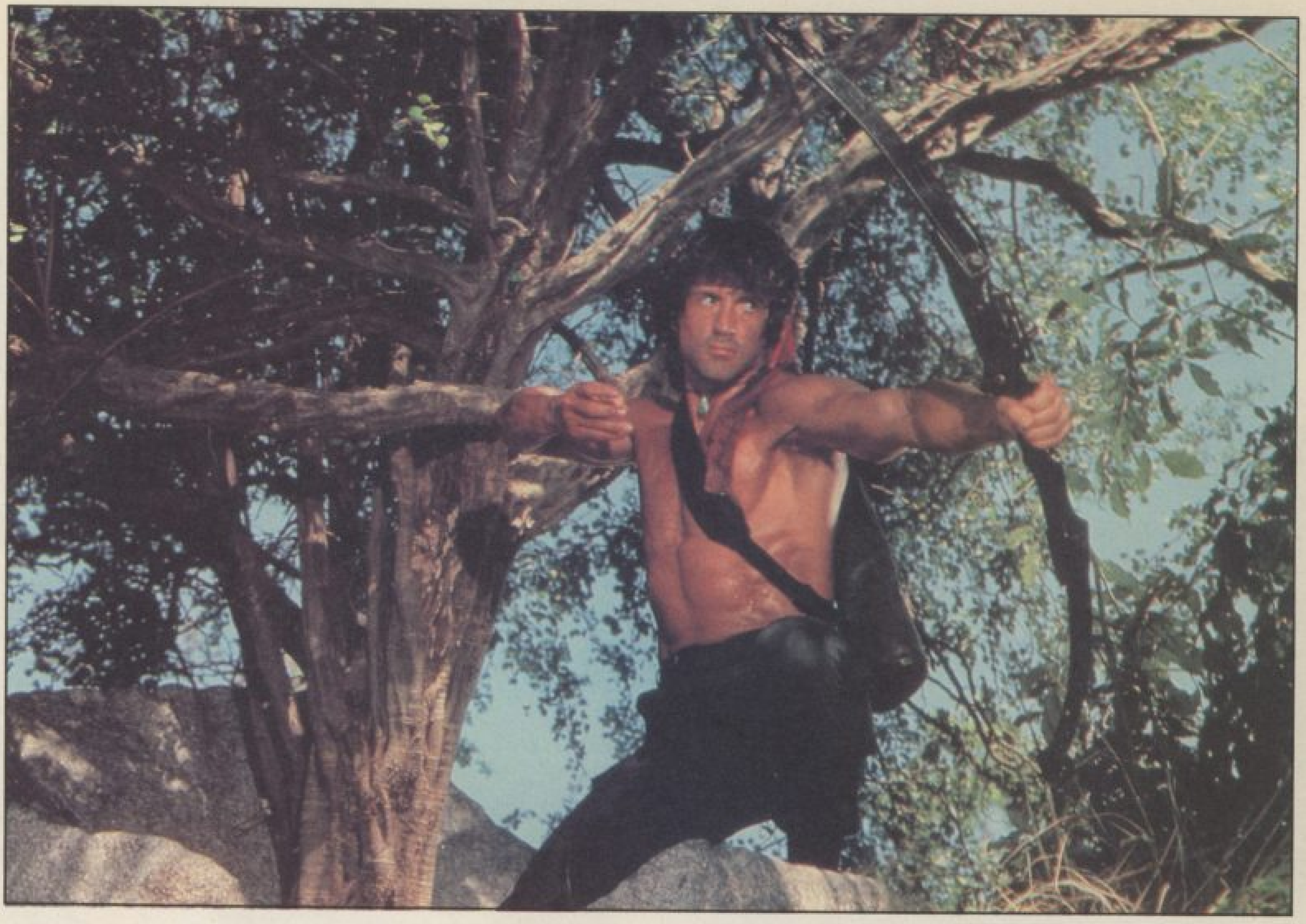
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RAMBO
– THE MAKING OF THE GAME

by Mike Pattenden

The paste had hardly dried on the film posters before we heard that Rambo was to be made into a game by Ocean. How did they get it? And just how do you go about turning a 90 minute feature film into a game? Mike 'Hotshots' Pattenden travelled away to Manchester to find out.

Since the success of *Ghostbusters*, games based on films are now a major source of income to the software world. But these days it's no longer a case of basing a game upon a popular film, *A View To A Kill* changed all that. Now the game is launched while the film is still rolling in the cinemas.

Rambo had to be an obvious choice for a computer game. Few films have stirred up the fever of enthusiasm that Sylvester Stallone's explosive return to Vietnam has created since its release here in August. Over in America it's grossed $130 million and looks set to be the biggest film yet. It has gone down well all over the world, packing out cinemas in war stricken Beirut and even El Salvador.

Everyone loves a shoot 'em up, and that is really all Rambo is, an indestructible comic strip hero who goes around destroying batallions of enemy troops, tanks and helicopters. It already sounds like a number of computer games on the market, so it came as no surprise to learn that Ocean had scored the deal to make the game of the film of the game.

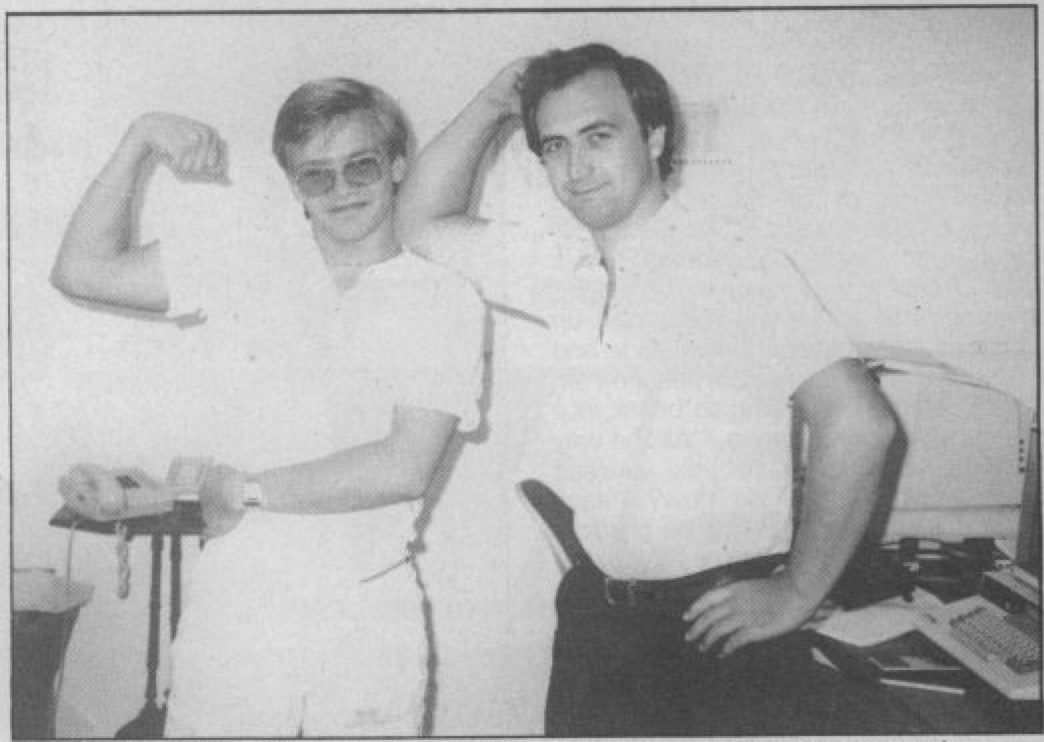
Big deal

"We had the Rambo deal fixed up well before it got here, before all the hype about banning it and Reagan making those comments," says Ocean director John Woods. In fact the deal was fixed up back in June when the rights to make the game were handed to Ocean on a plate by the company responsible for fixing all licensing deals for Rambo in this country, Movie Media Marketing. Tim Massey was the man responsible for offering Ocean the deal.

"One of the offshoots from the film we discussed with its owners was a computer game, and as it turned out we went straight to Ocean, because they have such a good reputation. Ocean came back with an offer which was very reasonable and that was it." The sum? Well of course no-one is saying but Tim Massey quoted "a substantial amount". We have to be talk-

ing telephone numbers.

With the deal fixed up, all Ocean had to do then was produce the goods. The only criteria being that it's produced quickly and that it's not naff. Looking at the track record of many games based on films that's a tall order.

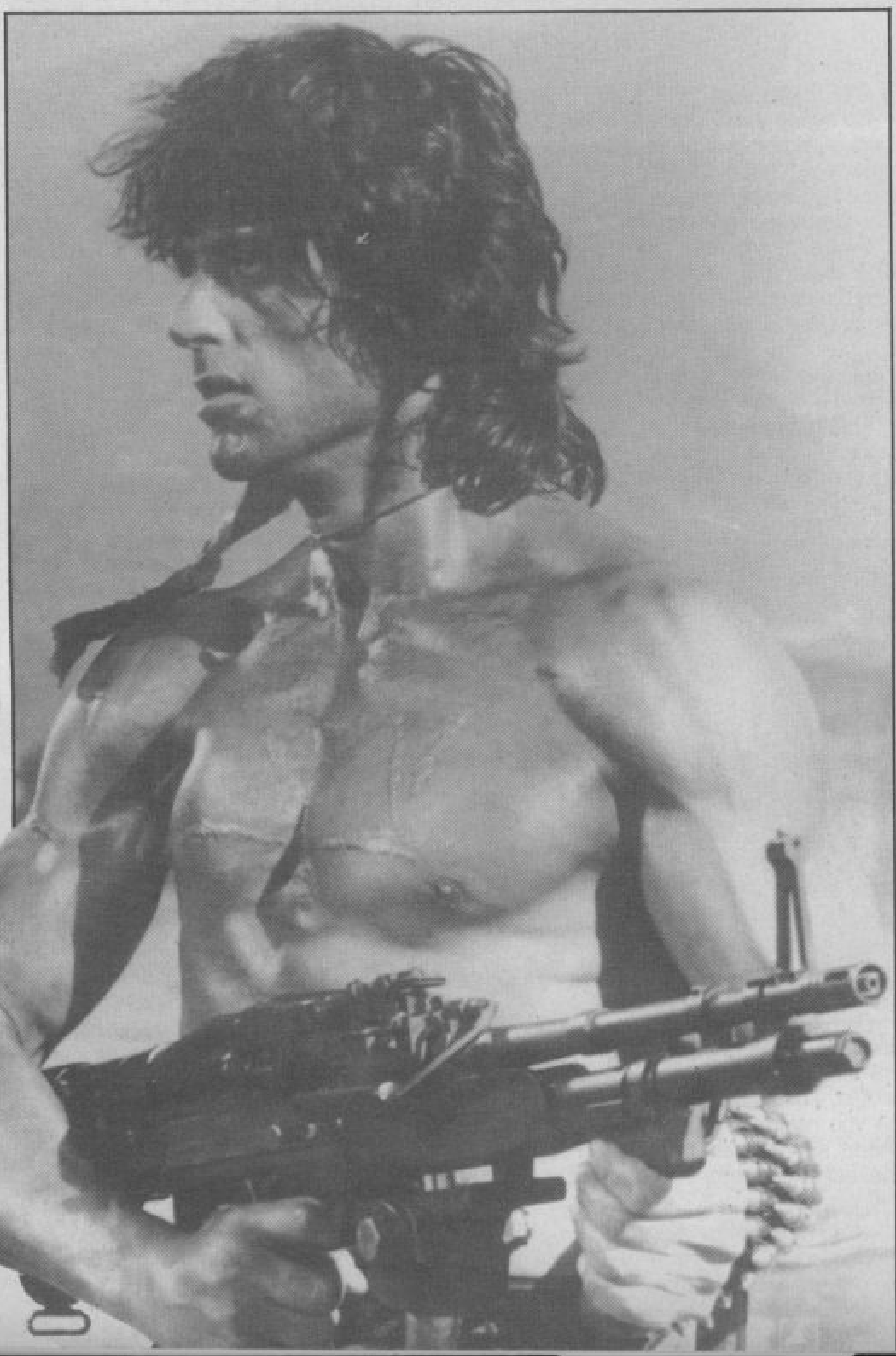


The Rambo team: Pomfret and Collier — you've seen more meat on a butcher's apron!

Meet the team

"The first we knew about it was when John Woods comes in and says 'I've got a present for you, we're doing Rambo'. We just went YYEEESS!!" The enthusiasm boils over from the sandwich-filled mouth of chief programmer and software development manager David Collier. He along with Tony Pomfret and Merton Gallway makes up the Rambo team. At twenty-six he's not exactly your programming whizz-kid, but he has got a good track record behind him, which is apt because he was responsible for *Hypersports* and before that *Daley Thompson's Decathlon*.

I was surprised to learn, though, that nineteen-year-old Tony Pomfret has had a computer for longer. They work as a team and they work fast. Nor are they your identikit programming types. "Look, tell them we don't come from good schools and we haven't been to university. We're both from Atherton, that's near Wigan, and we're layabouts, we're not stiffs!" says Tony. As if to prove the point we head off to the pub and shoot pool.



It sounds as if they have an easy time of it, but of course they don't. It takes a lot of thought and effort to produce a game. Not in quite the way I thought, though. I had expected to find 'the team' ensconced in front of a video of the film, eating endless TV dinners, memorising every move. True to form, Pomfret and Collier [listening to them it's more like Cannon and Ball actually] don't work that way. They saw the preview and that was it.

What do we do now?

"We loved it, it was bloody marvellous," laughs Tony. "We came back and wrote down all the major elements of the film and broke it down into four phases." I look around for a detailed storyboard. Naturally there isn't one. A pile of A4 printer paper is spread all over the table. On it crude childlike drawings of Rambo and trees and weapons are scrawled in biro. "We'll probably get around to doing a storyboard in a bit," says Dave to allay my fears. I relax a little.

"We've got it all sussed anyway," says Tony. "It's a weapons game, part arcade, part adventure. We plan to follow the film very closely." Evidently, by the arguments they have while I'm sitting there, they haven't got it all sussed. The end of the game in particular causes some problems. "I've got it, I've got it!" shouts Tony, leaping from his chair. "No I haven't," he says sitting back down again. "What do you think?", says Dave, "You write the reviews!" I duly give my considered opinion, and for a change it's well received. "Yeah, great, we'll do that." I'm not telling you what I said either.

The plot

Without giving away the plot [Michael] this is a rough outline of what happens in the game. It is, of course, subject to

change without notice and no doubt will be.

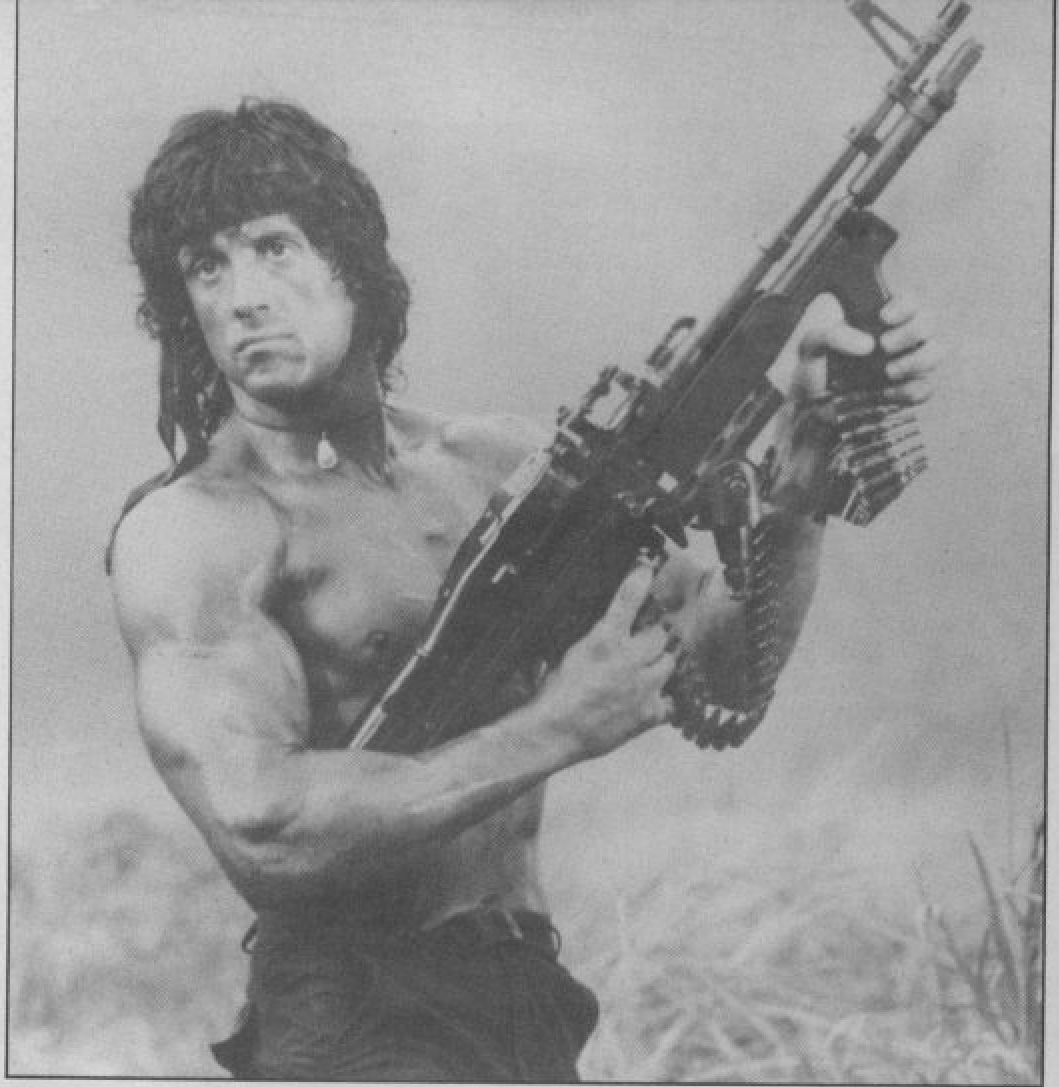
It will begin with a teletext-type message on the screen that simply says "It's up to you", just like the commander tells Stallone in the film. You naturally accept the mission — you wouldn't have bought it otherwise — which is to rescue imprisoned POWs from a Vietnamese camp in the jungle.

At various points you must pick up weapons littered around the place and use them in the correct order. For example, it's no use trying to break into the camp with a bazooka. "All the way through you'll have to ask yourself what would Rambo do now?" says Dave. I ask him if it might be predictable if you've seen the film. "Well now you say so I suppose it might have been, but it won't be because you'll always have a number of options and there will be other ways of succeeding. Nor will it be easy."

After you've rescued a prisoner you move on to Stage Two. This is you, Rambo, being chased on foot by the helicopter. You must not only survive its attempts to kill you but capture it too. Once you've secured the helicopter it's back to the prison camp for the next phase: blast hell out of Charlie and rescue the rest of the prisoners.

Then it's on to the final stage with the classic helicopter chase you see in the film. How do you survive a gunship that's faster and more heavily armed than you? It's up to you to find out, Rambo.

It all sounds very impressive — with all the puzzle and zapping it should be a dream game to play. If anyone can do it then Collier and Pomfret can, their blase attitude inspires a kind of blind confidence. The set-up in the room they call 'the Tip' provides rather more concrete evidence.



A few technicalities

"No-one has the kind of development system we're working with here, because we've built it ourselves." Basically they have two 64s linked up via three communication lines. This allows the machines to talk to one another in a "complicated handshaking technique". This in turn allows them to utilise 128K of memory, though not of course at the same time. *[Why not buy a C128? — Ed.]*

So what you'll get will be the same kind of technique used on *Sabre Wulf* where entire blocks are repeated all over the place to generate the effect of a changing landscape.

What of Rambo, will he be a little blob drifting around the screen? "No way", says Dave vehemently. "He'll probably be two, maybe even three sprites big. We'll give him the headband and the muscles. You'll know it's him" — maybe one sprite per muscle.

The scale is big as well. Fifteen screens tall, maybe thirty (they haven't decided yet) by three wide. The view you will get is a sort of elevated camera angle, situated 180° behind Rambo. You will be able to see him in profile, though, because he can turn. As you move him up-screen the landscape scrolls past. They had finished the scrolling before I left and it was smooth and surprisingly quick.

There will be musical accompaniment — not just when the game loads, but all the way through, and not one of the horrible la-la tunes you get with many games. This is where Merton Gallway comes in. He was the man responsible for that superb loading music on *Hypersports.* He'll be looking to get that pompous Rambo music onto your 64, plus a variety of sound effects, like jungle noises and drums. Typically, the expensive looking synth in the corner of the room is discarded for a piece of home-made junk that looks like it came out of a rubbish skip.

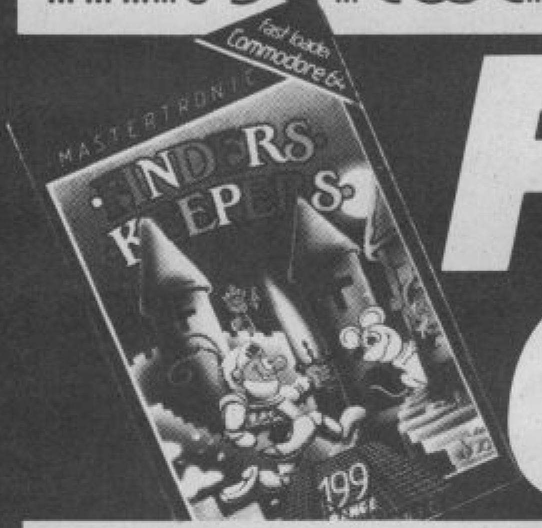


Speed freaks

So there you have it, now all they've got to do is put that all together before the November deadline. Sounds impossible. "We did have a minor setback just before you came actually," smiles Tony. "We lost everything we'd done so far when the power failed. It was really funny, one minute there was that little buzz of activity you get when everyone's busy. Next minute, complete silence — then the air was filled with obscenities!" So you're behind then? Tony again: "Not really, we work very fast, I can't understand these programmers who spend a year on their games — it'd bore us senseless. *Roland Rat* took three weeks. We'll beat the deadline." I wouldn't give you odds on them missing it either.

That, then, is how the *Rambo* game got underway, but the story has only just begun and Commodore User will be keeping in touch with the 'team in the Tip' to keep you up-to-date on the game's development.

Mr. Software





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(Original letters available for inspection.)

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Rocky road ahead for Amiga in U.S.

Dan Gutman reports

Those fortunate few who've already seen the Amiga just can't stop drooling about it. Our very own drooling Dan takes a sharp-eyed look at the machine's real chance of success — or failure.



Friends, Romans, Commodorians,

Lend me your ears, 'cause Amiga even has stereo sound!

Well it finally happened. I can hardly believe it. Amiga is here. I first heard about this machine nearly three years ago, and now they finally released the thing. Commodore threw a good bash in New York City, and they even hired celebs like Andy Warhol and Debbie "Blondie" Harry to demonstrate the new machine. (I was *wondering* whatever happened to Debby Harry.)

I don't have to tell you the vital statistics. You know them all — 256K expandable to nearly a zillion. Graphics like you've never seen. Animation. Mouse. Menus, IBM compatible. 4096 colours (compared to Macintosh's *two* colours — black and white). The thing will do everything but fold your shirts. $1,295. I don't know what the response was over there, but Amiga caused quite a sensation over here.

Words cannot describe the unnatural longing I have for this machine. It's a marvel. I want one. Amiga may be the most perfectly designed computer ever invented.

Sale of the century?

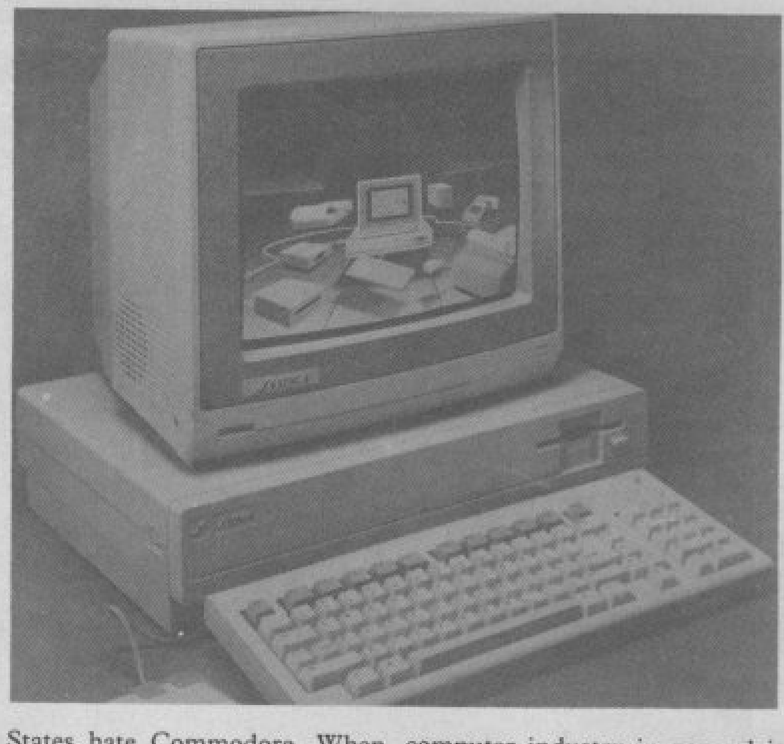
It could also be the failure of the year.

What?! Failure!? Bite your tongue!

I know it sounds like heresy, but let's be realistic about this thing. Amiga is a fantastic machine, but there are a lot of problems that have to be solved, at least here in the U.S. Like these:

• **Computer stores.** Where will they sell the thing? They won't be selling the Amiga in Computer Land, Businessland, or Entre, the three largest computer store chains in the United States. They have all announced that they won't be carrying it. It's doubtful that we'll see Amiga in discount stores either, because people don't buy many $1,295 items there. Commodore has to count on the small chains of computer stores to sell Amiga.

• **Computer store owners.** It's a well-known fact that computer dealers in the United States hate Commodore. When Commodore introduced their C-64 a few years back, it was sold in computer stores for $600. As soon as the machine became a success, Commodore gave it to the discount stores and slashed the price. The computer stores were burned, and they don't want it to happen again. That all happened under the Tramiel regime, but it takes a long time to forget. Commodore is desperately trying to convince dealers to carry Amiga, but so far they've only signed a few (New York's The Computer Factory and Atlanta's Computone).



Even if the Commodore/computer store relationship was good, dealers' shelves in the United States are already crowded with IBMs, Apples, Ataris, and other computers.

• **Commodore's finances.** A couple of years ago, Commodore was earning record profits. In their last quarter, they lost $21 million. They're depending very heavily on the Amiga to turn the company's fortunes around.

• **The Slump.** The American computer industry in general is in a bad slump. Commodore is hoping that things will pick up by Christmas, and buyers will pick up the Amiga.

• **Commodore's image.** Because of its phenomenal success with the Vic-20 and Commodore 64, Commodore is known on these shores for making very expensive (some might say "cheap") computers for the computer novice. The Amiga is not inexpensive, and it's not aimed at novices. The sophisticated audience Commodore is going after may reject a machine from a "toy" company. Commodore is obviously worried about this — they didn't even put the name "Commodore" on the Amiga's case.

• **Amiga's audience.** Just who is the Amiga targeted at anyway? Commodore says they want to sell Amiga to the small business community, but the computer's amazing graphics and sound almost cries out for home entertainment applications. But how many home users have $1295 to spend on *any* computer?

• **Amiga software.** Commodore says there will be 50 software packages on the market for Amiga when it is released. But like any new computer, it will take at lest a year before software developers can produce a good library of programs for the Amiga.

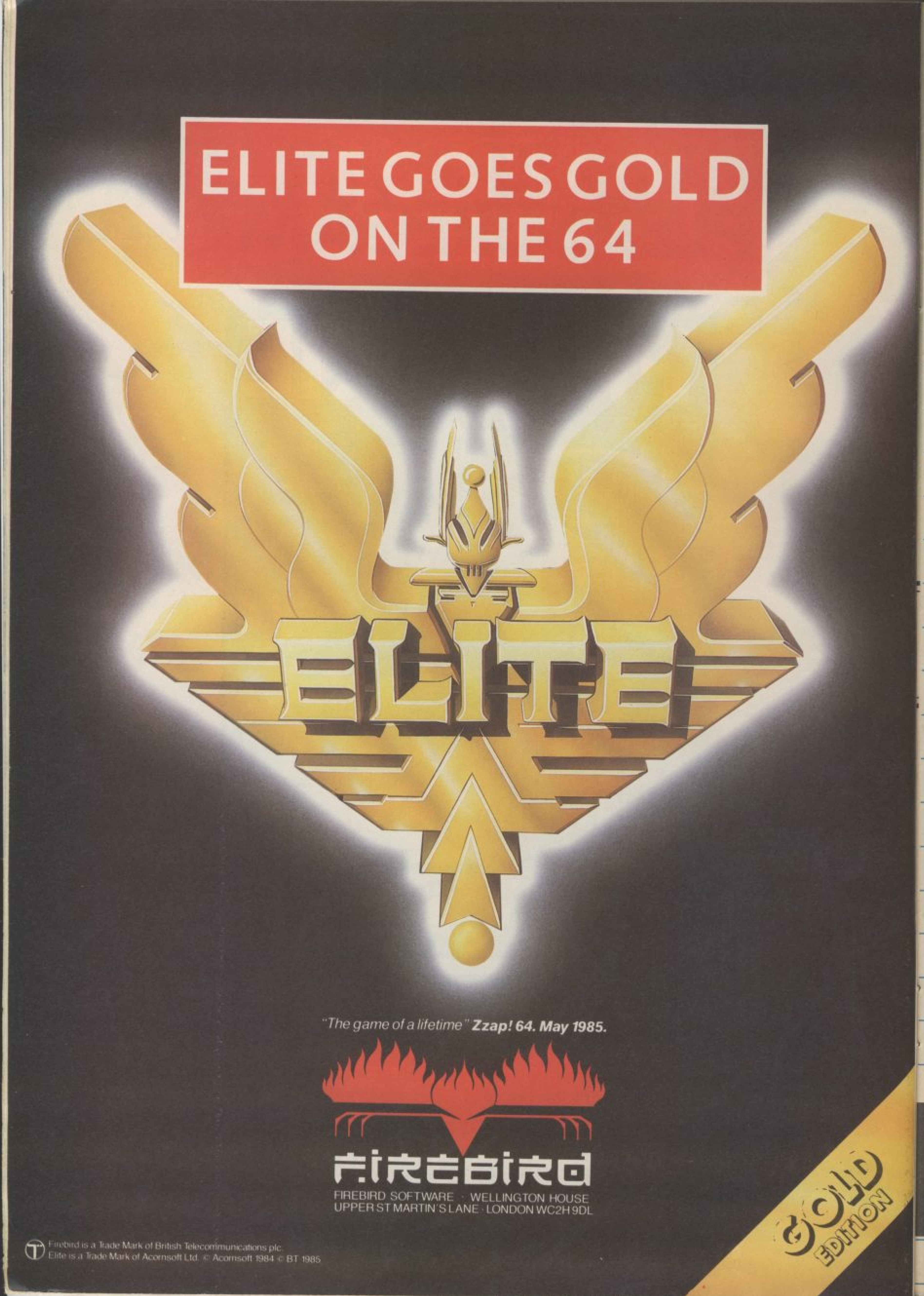
Think positive

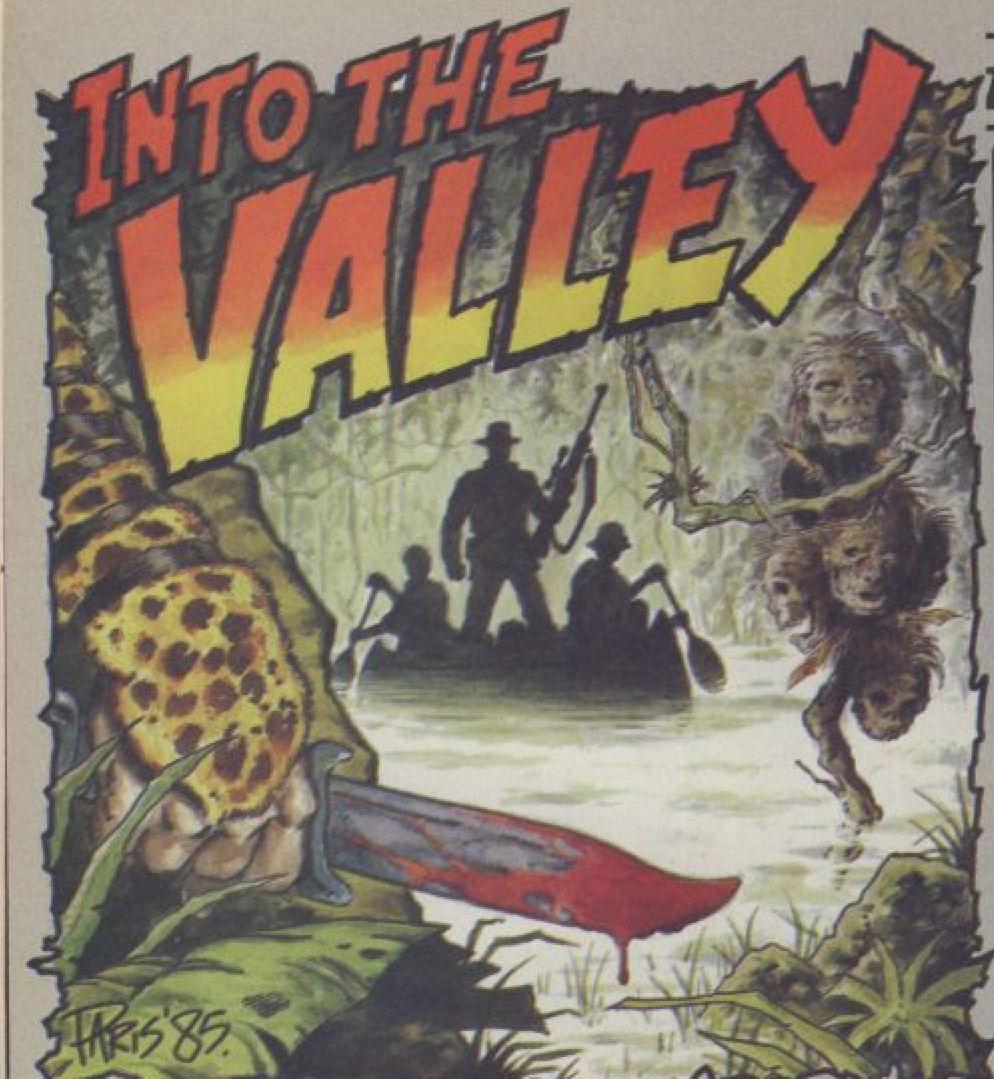
But it's no fun to dwell on the negative. I don't mean to be a party pooper, I just want to make you aware that there's no such thing as a sure thing. The Amiga is a truly remarkable machine that will have to overcome some pretty serious obstacles in order to achieve success. It's unfortunate that business and industry factors have to be taken into consideration when predicting the success or failure of a new and exciting computer. Just having a good product is not enough.

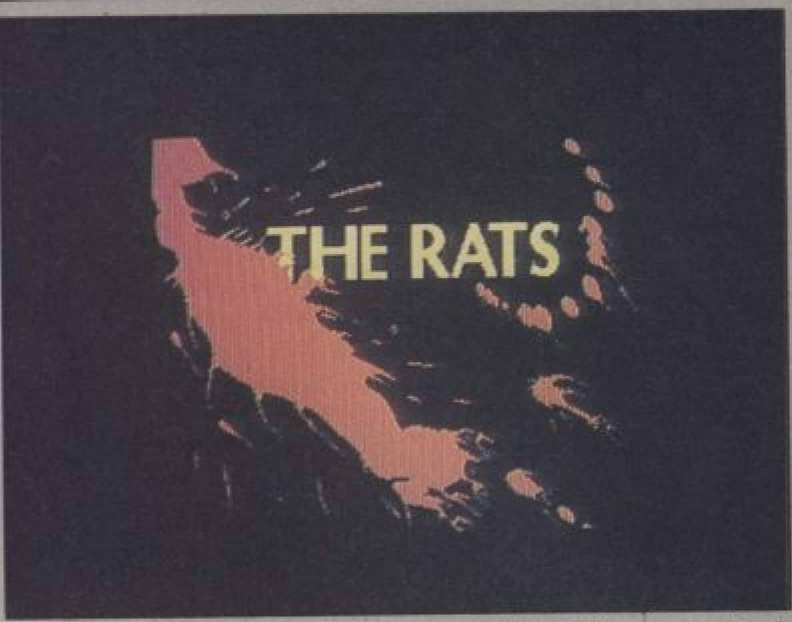
Any way you slice it, the Amiga is the most exciting computer development this year, and most industry watchers in the U.S. are rooting for it to succeed. I know I am. This industry desperately needs something new and exciting.

Before I go and leave you to mull all this over are you folks fans of adventure games? They're very popular over here and US adventurers have a new newsletter written just for them — Questbusters. It's got reviews of all the latest games, hints, and sneak peaks at upcoming games. A yearly subscription costs $15, but if you mention MY NAME, they'll give you a free issue to look over. What have you got to lose? Write to: Shay Adams, 202 Elgin Court, Wayne, Pennsylvania 19087 U.S.A.

One more thing that has nothing to do with computers. That Live Aid benefit in July had me and America glued to the screen for 17 hours. When the US and the UK put their talent and technology together, amazing things can happen. See you next time! □


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Dirty Rats

If you suffer from a phobia, you can safely bet that an author or film maker has already made a fortune out of it — or is well on the way to doing so. Rats are always a good bet, they're dirty and they're vicious and most people, like Winston Smith in 1984, are scared of them. As a one-time resident of a block of flats in our rodent-ridden capital, the squeakings and scratchings and darting shapes of darkness which set the scene in the title screen of **The Rats** (Hodder & Stoughton, £7.95) brought memories of the nocturnal wild-

BY JOHN RANSLEY

New Infocom titles appear about as often as Haley's comet — all hail the new *Wishbringer*. Also this month: video nasties fans get a rodent-romping treat with *The Rats*, and DIY boffs get *Adventure Construction Set*. Latest news and Charts round up this month's Valley.

Make a wish

I have it on good authority that whenever a new Infocom title turns up over here, at least two leading UK adventure publishers spend a couple of days just studying the packaging, artwork and documentation before they even start playing the game. Even a cursory glance at **Wishbringer** shows why. Its presentation is all quite faultless — and a million miles distant from the tacky packaging Commodore fudged when they marketed the Zork trilogy and certain other Infocom titles in the UK. The wonder of it is that Infocom allowed Commodore to do their reputation such a disservice.

Wishbringer is described as a text adventure for novice players but in my experience it is of much broader (and subtler) appeal than that. The chunky box it comes in contains a booklet that describes — with the help of some great full-colour illustrations — a mystical legend that serves as the springboard for your quest; a map of Festeron, a small American town where it all begins; an enchanted stone that glows in the dark (just like Pete Austin's wallet); and a very mysterious sealed envelope clearly bearing the handwriting of Bela Lugosi.

Infocom adventures are unique in the way that they shuttle information to and fro between the random access files and RAM — indeed, this is of course the reason why they're only available on disk. Players used to instant responses may find it a little irritating initially to have to wait while the 1541 groans and grinds in response to every input — but even that will be a thing of the past for those with enough ackers to buy the sooper-dooper new 1571 drive. In any event, those few seconds of waiting are a small enough sacrifice when weighed against the significant advantages that Infocom's disk-interactive games offer.

For a start, descriptions are nearly always lengthy and therefore more detailed and interesting. The system allows for lengthier prose than even the most ingenious text compression system can offer over the same number of locations. It also



leaves more onboard RAM available for a much more sophisticated parser than most adventures wholly resident in memory can muster. For example, the following is a perfectly acceptable single input in *Wishbringer:*

QUESTION MR CRISP THEN ASK HIM ABOUT

• ADVENTURE NEWS • ADVENTURE NEWS • ADVENTURE NEWS • ADV

• **Forsyth, Herbert and Palin** had to take a back seat on the adventure express at this year's Personal Computer World Show, where there was standing room only at the sneak previews of **The Fellowship of The Ring** — the (very) long-awaited sequel to *The Hobbit* from Melbourne House. Fellowship is the first part of a trilogy, to be completed by *The Two Towers* and *Return of the King*, and initial impressions were that Philip Mitchell *et al* have surpassed the standards they set with the world's best-selling computer adventure; graphics and sound on the 64/128 version of *Fellowship* are particularly outstanding.

• **Touchstones of Rhiannon** will be the first of the *Robin of Sherwood* graphic titles from Adventure International, exclusively previewed in our July issue. Price of the 64/128 version — due out any day now — will be £7.95.

• **Some doubt** still surrounds Beyond's pricing policy for *Lords of Midnight* following the sudden withdrawal of an announced price cut to £4.99 as a trailblazer for Mike Singleton's new landscaped blockbuster, **Eye of the Moon**. Meanwhile, keen-eyed adventurers will have tracked down *Midnight* as one of the six chart hits included in the Now Games 64/128 compilation from Virgin priced at £8.95.

No sign yet, though, of a 64 ver-

life in that particular habitat uncomfortably back to life for me.

This somewhat strange hybrid of a game borrows of course from James Herbert's unsettling horror novel about a plague of monster rodents terrifying London and the efforts of the three central characters to destroy them. Having barely recovered from that effective title page, you're plunged straight into the task of containing the menace with the help of professional rat killers, the police, firemen, and the army. A wide choice of weapons is at your disposal — ranging from flame throwers to sonic scramblers — and you have complete control over which equipment you utilise and how you deploy it.

Information from the public, the R&D centre and the forces periodically scroll across the screen tickertape fashion, and you can supplement this by requesting reports from any of the areas on the master map where sightings are made.

All these options are accessed and called by clear and easy-to-use Macintosh-style pull-down graphics; a joystick makes life even easier. The crossover to a text-input adventure comes every time you hear the dreaded alarm that signals an imminent encounter with the rats. In these cases, you take on the persona of the potential victim — be it a schoolgirl, shopkeeper, old man or whatever — and the screen changes to a window of scrolling narrative. Another window presents a choice of nouns and verbs from which you can construct a command.



Again, you have to be quick to avoid a very unpleasant demise. But if you do survive, the experience and extra knowledge gained should help ensure your victory in future encounters.

As *The Rats* comes from the same team at Fiveways Software who created *The Fourth Protocol* for Hodder & Stoughton, one is bound to spot some similarities between the two. Personally, I found that — in the absence of all those fashionable icons that I thought made *TFP* too fussy by half — *The Rats* is much easier to get into and start enjoying. But a couple of the screen designs — and certain elements of the graphics, such as the face of the "terrified" victim in a fatal encounter — were curiously crude and unimaginative. They looked unfinished; almost as though their designer had lost interest halfway through. True, mine was an advance review copy and itmay be that those below-par sheets will be improved.

Other than that, *The Rats* does indeed offer an intelligent and addictive challenge — part strategy, part adventure — which you'll find hard to resist taking up time and time again. After all, there is something very satisfying about creaming a few score loathsome rats as an exercise in intellectual superiority, even if they do only (thankfully) scurry about inside your 64!

THE LETTER. READ THE POSTERS THEN TAKE THE LETTER THEN LEAVE POST OFFICE THEN GO SOUTH.

You can dictate actions:

GRAVEDIGGER, UNLOCK THE CEMETERY GATE.

Infocom titles for the 64 are always particularly rich in refinements which other adventures cannot reach, and *Wishbringer* is no exception. Special inputs include AGAIN, to repeat your previous sentence; SUPERBRIEF and VERBOSE to give you short or long descriptions of the places you visit; and the invaluable SCRIPT, which dumps a transcript of everything that appears on screen to your printer. When used with the SAVE and RESTORE functions, this facility is very helpful for working out where you've gone wrong!

• CHARTS •

NEW	1	(–)	**Red Moon** — C64/128 (Level 9, GrA, £6.95)
	2	(8)	**Castle Blackstar** — C64/128 (CDS, TA, £2.99)
NEW	3	(–)	**The Fourth Protocol** — C64/128 (Hutchinson, GrA, £12.95/£15.95 disk)
	4	(1)	**Subsunk** — C64/128 (Firebird, GrA, £2.99)
NEW	5	(–)	**Beatle Quest** — C64/128 (Number 9 Software, TA, £9.95)
	6	(3)	**Gremlins** — C64/128 (Adventure International, GrA, £9.95)
	7	(–)	**Jewels of Babylon** — C64/128 (Interceptor, GrA, £9.95/£11.95 disk)
NEW	8	(–)	**Terrormolinos** — C64/128 (Melbourne House, GrA, £7.95)
	9	(6)	**The Helm** — C64/128 (Firebird, TA, £2.99)
	10	(9)	**Emerald Isle** — C64/128 (Level 9, GrA, £6.95)

This month's chart gets all shook up with scores of readers' votes helping to send Level 9's newest title straight to the top spot just a few weeks after its release — and with *The Worm in Paradise* wriggling just around the corner, the Austin clan seem all set to make it a hat-trick.

The newly-released budget C64 version of *Castle Blackstar* nudges nearer the No.1 slot, and *The Fourth Protocol* makes its first appearance in the Valley, having apparently won over dyed-in-the-wool adventurers who were initially a little sniffy about its element of arcade gameplay — the same kind of concession to mass appeal that spoiled *Eureka!* for some.

Gary Marsh's intelligent and often very funny send-up of the Swingin' Sixties deservedly gets an early and respectable toehold, auguring well for his next trip down Penny Lane.

Peter Jones and Trevor Leever break the mould of dungeons and dragons in favour of the Costa Packet and Spanish Fly in their very silly and highly entertaining new title for Melbourne House, which makes its chart debut this month. *Terrormolinos* seems to be just the ticket to warm the hearts of shivering adventurers as we anticipate another joyful winter of rail disruptions, ungritted roads and interminable advice from Breakfast TV about what to do with the turkey left-overs.

• ADVENTURE NEWS • ADVENTURE NEWS • ADVENTURE NEWS • ADV

sion of Doomdark's Revenge. Beyond's usually communicative Clive Bailey wasn't available to lift the mist when I phoned him, being heavily into his own personal adventure — away on honeymoon. I'm sending him a hints sheet.

• **Cult and commercial** success of **Beatle Quest** has prompted author Garry Marsh to negotiate with Rocksoft over the development of two further titles featuring the lyrics of the Merseyside mopheads' hits of the 60s and 70s, provisionally titled *A Day in the Life* and *Across the Universe*.

• **Crossover** from the pop industry grows stronger by the minim. Global Software have 101 software bosses asking themselves, "Why didn't I think of that?" by snaffling one of the biggest-selling instrumental themes ever — Mike Oldfield's Tubular Bells — to add atmosphere to a new graphic adventure, **The Magician's Ball**, out soon at £7.95.

• **Watch out** for Ariolasoft's full-blooded flashback to role-playing fantasy in **Seven Cities of Gold**, a gargantuan quest set in the 16th century world of Spanish conquistadors. It features more than 2,800 screens representing 11 million square miles of the undiscovered New World. It comes on disk at £14.95 but a tape version will follow soon.

• **Currently** enjoying the largest share of UK arcade games market

Jolly good hockeysticks

A reviewer's life is not short of contrasts, as an hour spent on exploring **The Secret of St Bride's** soon confirmed. Apparently there really is an establishment of that name in County Donegal where grown-up ladies who pine for yesteryear's wet afternoons of lacrosse can relive their schooldays — and this Quill-aided effort is a spin-off venture that isn't half bad, as it happens.

Given the constraints on tricky programming which The Quill imposes, it's very necessary for authors using it to compensate with good narrative and a decent sprinkling of original puzzles. Certainly the author has managed to suggest something of the atmosphere of dusty academic torpor of a 1930s gels' school, though as the heroine Trixie Trinian you will, if you say the right things, eventually find yourself transported back to the time of Cromwell, exploring ancient Ireland, and joining in the life of Dublin at the turn of the last century. You'll find *The Secret of St Bride's* in all good tuck shops, price £6.95.

PS: Sorry to disappoint Mike ("Hot Shots") Pattenden and all the other Benny Hills at Priory Court who were hoping to drool over screen shots of nubile young things in gym slips; only the Spectrum version has Illustrator-generator graphics! *(Don't believe you — return the tape—MP.)*

DIY adventure kit

If you're among those gamesters who've always longed to create their own computer fantasies but have never mastered the arcane dialect known as Commodore BASIC 2.0 (so join the club), then Stuart Smith's new **Adventure Construction Set** (disk only, £14.95) is just what you've been waiting for. And it certainly packs a lot of value into a single disk. To start with, there are six mini-adventures plus a full-scale epic that powerfully demonstrates that, when it comes to creating full feature graphic games, the ACS takes over where Quill leaves off.

For example, to begin with you can choose the general mood of your game — mystery/spy thriller, fantasy, or science fiction. Next, you're free to create up to 240 locations and then fill them with magical objects, furniture, treasures, weapons, ways



to make things disappear, the means of summoning and banishing creatures, and so on. Scores of such elements are available off-the-shelf, but you also have the option to create your own. There's even a facility to add music and special sound effects to any location.

The central character in your adventures comes under joystick control, and he or she can embody the subtle quotients of character traits, powers and wisdom, strengths and weaknesses that play such an important part in role-playing lore. In fact, the sophistication, polish and playability which the ACS makes possible is impossible to describe fully — but all the fine tuning is clearly explained in the set's excellent instruction manual. One of the most attractive features of the ACS is that if you tire of the chore of creating any particular adventure, you can command the utility to take over and finish it for you.

The *Adventure Construction Set* is so good, and so comprehensive, that it's the only utility of its kind I'll ever need. My only gripe is that one module must be resident in memory to Run and play games of your own creation. So that unlike the ubiquitous Quill, for example, the *Adventure Construction Set* can't be used to generate stand-alone games which you can copy and give to friends.

Castles in the air

Plunge yourself into the world of **Castles & Kingdoms,** a plump, large format compendium of 15 adventure listings from Virgin Books, and you'll know what it's like to challenge Smaegor the King of the Dragons, encounter deadly spiders in a hunt for gold, enlist the help of intelligent werewolves, and try to beat a master thief at his own game.

Bob Liddil's fertile imagination has produced a collection which is head and shoulders above anything else of its kind I've ever seen, and the big page size (the same as this magazine) and large listings mean that you won't be prone to migraine after keyboarding a few dozen lines. The structures of the programs themselves are not awfully sophisticated but they'll teach the novice a lot.

The listings are printed with exemplary clarity; but if you're feeling exceptionally lazy, the book includes an order form for a tape containing all 15 games for £3.50. The book itself is priced at £5.99 and that makes *Castles and Kingdoms* excellent value. □

• COMPETITION •

Virgin Books' new large format compendium of no fewer than 15 adventures should keep even the most resourceful problem-solver happy for a few dozen hours — and Virgin, good sports that they are, have pitched in no fewer than FIVE copies of **Castles & Kingdoms** as prizes in this month's competition. Better still, winners will also receive a specially-prepared tape containing all 15 games ready to Load into your 64 or 128 — just think how grateful your digits will be for saving them all that keyboarding!

For a chance of winning, you simply have to decide which of the following isn't part of a castle:

A. Portcullis
B. Portmanteau
C. Postern

Circle your choice on the form below, add votes for your three favourite current adventures, and mail the coupon to the address shown as soon as you can. Winners will be announced in our December issue.

The odd one out is: A B C

My three favourite current adventures are:

1...

2...

3...

Name ....

Address ....

....

....

Send your entry to CASTLE COMPETITION, Commodore User, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

• ADVENTURE NEWS • ADVENTURE NEWS • ADVENTURE NEWS • ADV

with their American imports, US Gold have still to notch up a meaningful adventure hit this side of the pond — with previous titles such as *Dallas Quest, Mystery Manor* and *Exodus Ultima III* evidently either too puerile or too pricey for British popular tastes. But a new 64/128 title that could change all that is **Alternate Reality** from Datasoft, which US Gold might release here soon. It's winning acclaim Stateside as an innovative arcade-cum-adventure challenge featuring colourful true perspective graphics and sound.

Bantam Books' **I, Damiano**, an animated graphics puzzler with randomised scenarios and solutions, and **Sherlock Holmes in Another Bow** may also make it to these shores soon, possibly courtesy of Hutchinson.

• **Do-it-yourself** fantasies seem to be all the rage; hot on the heels of Ariolasoft's *Adventure Construction Set* (reviewed this issue) comes **Genesis** from CRL, described as "a complete adventure system". We'll compare it next month.

CHARTS

WE'VE DONE IT AGAIN!

As we predicted last month, *Summer Games II* has shot to stardom, and *Hypersports* is following fast on its heels. Expect little change at the top next month.

This month's two **Screen Stars**, *Frank Bruno's Boxing* and *Blackwyche*, will undoubtedly make an appearance, one of them probably at the expense of *Dambusters* which seems to have run its course. The value for money pack *Now Games* will probably go higher.

Get set, though, for the Christmas shake up as those mega games get released. What price *Winter Games* for the December chart topper?

COMMODORE 64

	Title	Publisher
1	Summer Games II	Epyx/US Gold
2	Beach-Head II	Access/US Gold
3	Way of the Exploding Fist	Melbourne House
4	Skyfox	Ariolasoft
5	Frankie Goes to Hollywood	Ocean
6	Elite	Firebird
7	Hypersports	Ocean
8	Kickstart	Mastertronic
9	Clumsy Colin Action Biker	Mastertronic
10	Rescue on Fractalus	Activision
11	Softaid	Various
12	Finders Keepers	Mastertronic
13	Now Games	Virgin
14	G. Gooch's Test Cricket	Audiogenic
15	Thing on a Spring	Gremlin Graphics
16	Cylu	Firebird
17	Pitstop II	Epyx/US Gold
18	Dambusters	Sydney/US Gold
19	Speed King	Digital Integration
20	Tour de France	Activision

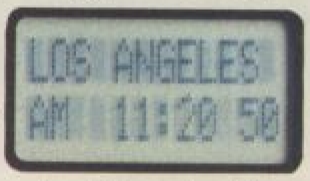
GENERAL CHART

	Title	Publisher
1	Way of the Exploding Fist	Melbourne House
2	Summer Games II	Epyx/US Gold
3	Nightshade	Ultimate
4	Frank Bruno's Boxing	Elite
5	Beach-Head II	Access/US Gold
6	Frankie Goes to Hollywood	Ocean
7	Hypersports	Ocean
8	Skyfox	Ariolasoft
9	Finders Keepers	Mastertronic
10	Clumsy Colin Actin Biker	Mastertronic
11	Dambusters	Sydney/US Gold
12	Elite	Firebird
13	Softaid	Various
14	Beach-Head I	Access/US Gold
15	Now Games	Virgin
16	Formula One Simulator	Mastertronic
17	Red Moon	Level 9
18	Highway Encounter	Vortex
19	BMX Racers	Mastertronic
20	Chiller	Mastertronic

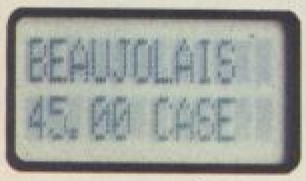
The greatest breakthrough in wrist technology since Seiko introduced quartz.



Have you ever forgotten an appointment, the price of a product, or even your own anniversary? Not any more. The new Seiko RC-1000 Wrist Terminal will change all that, permanently.

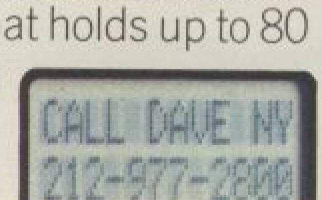


Only Seiko's advanced micro electronics technology could have produced the RC-1000. It is in fact, a computer terminal:



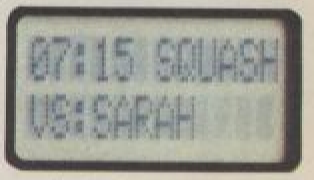
miniaturised then fitted into a small stylish module to be worn on your wrist like a watch, ready to recall important data from your personal computer* any time, anywhere.

The RC-1000 has a 24 character screen and an extensive memory that holds up to 80 screen 'pages' of information that can be sub-divided into 12 separate data files. A detachable lead allows it



to interface to the RS232 port of your computer and a sophisticated menu-driven database allows you swift access to your files.

Now imagine what the RC-1000 could do for you. As an 'electronic notebook', you can keep addresses, prices, statistics, in fact any type of file, ready to recall at the touch of a button. The



memory also keeps track of world time zones — vital for international business; you can display schedule reminders that can be used



with the alarm function up to a year in advance (good for birthdays); or set to repeat at the same time every week. The list of uses is as endless as your busy timetable. The computer has revolutionised working lives. Now let the RC-1000 revolutionise your life.

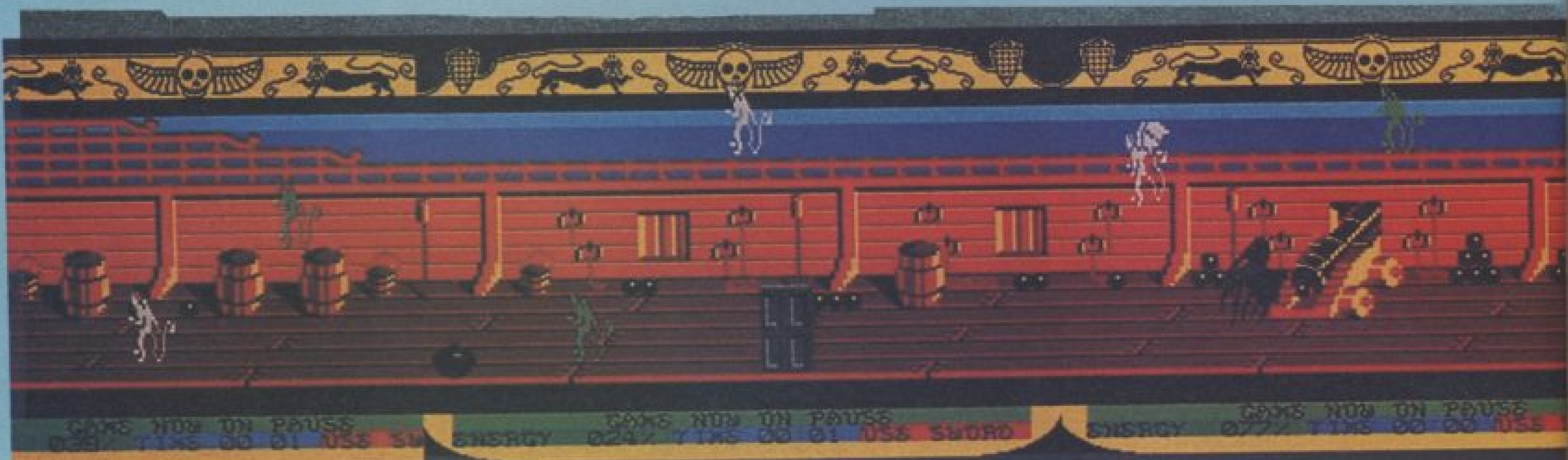
SEIKO

RC1000 WRIST TERMINAL

The Seiko RC-1000. £99.95. At all good computer specialists, now.

*IBM PC • Apple II E • Epson PX8 • BBC Model B • Commodore 64 • Sinclair Spectrum





Top deck of the Blackwyche. Can you spot Sir Arthur in his cool black cloak?

SCREEN STAR

This month's Screen Scene is nearly as weak as last month's — barring a few exceptions — because most software companies were sitting on material for Christmas or too busy preparing for the PCW Show. Nevertheless Ultimate's new game, Beyond's *Nexus* and the boxing games are as good as any of this year's best offerings. Stand by next month for a bumper collection of quality material for the yuletide rush.

Black Wyche
Commodore 64
Ultimate
Price £9.95/cass

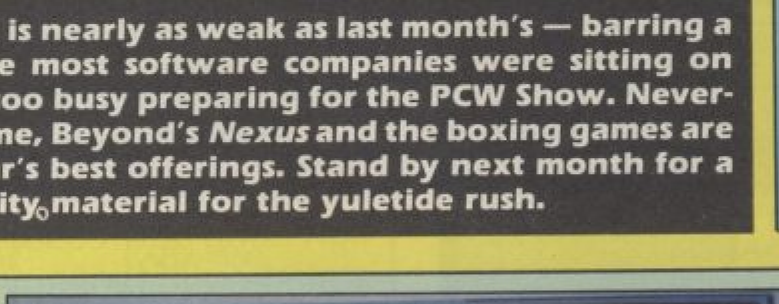
Ultimate's Arthur Pendragon has seen some action in his few brief months of superhero-dom.

In his first game, *Staff of Karnath*, he wrestled with the ancient Egyptian ghouls underneath one of the pyramids. Snakes and beetles were his foes

Nexus
Commodore 64
Nexus
Price £9.95/cass

Beyond Software continue to live up to their reputation for innovation in computer games with *Nexus* — the first game to feature graphics produced with an image digitiser.

To add to the realism of the game's characters, programmers Paul Voysey and Tayo Olowu used snapshots of their friends, and then converted them to 64 machine code with a Print Technik digitiser. The screen shots above show the detail that can be obtained using this technique.

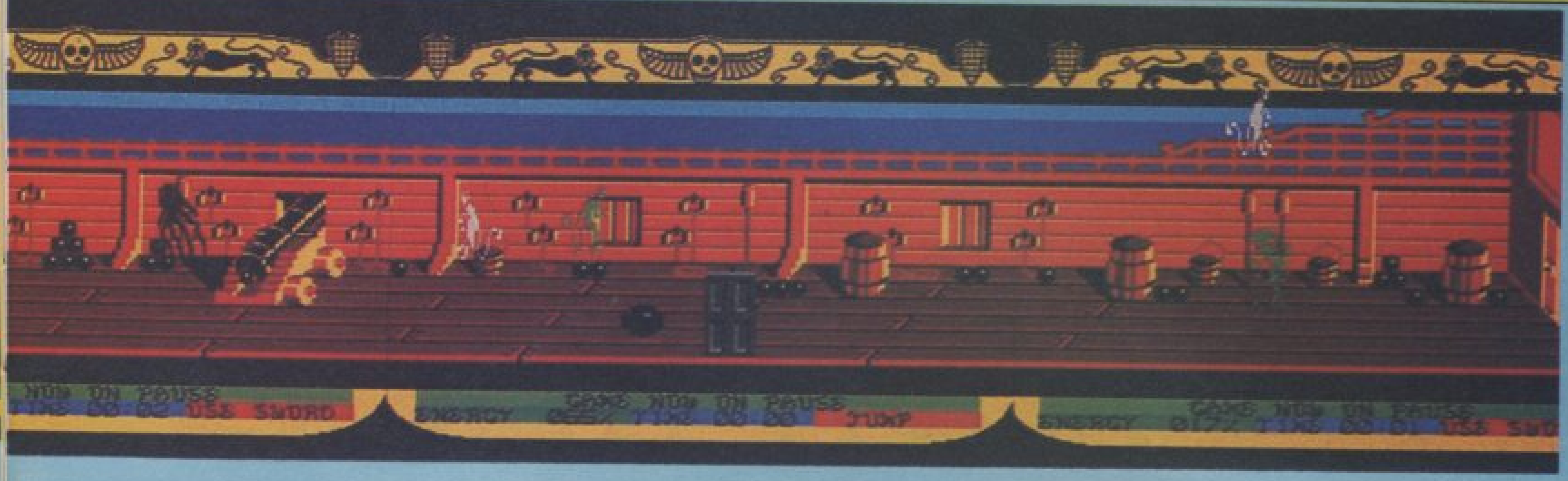


But *Nexus* is not only innovative in its graphics. The game design is equally new and refreshing — getting away from the map, collect, and puzzle idea that has characterised the arcade adventure for the last couple of years.

In *Nexus* you are an investigative reporter who travels to Colombia to track down a friend who went missing trying to infiltrate a drugs ring.

Your contact is with a group called 'Nexus' who consist of dissidents from the drugs organisation bent on breaking it from the inside.

Your objective is to gather evidence of the drug factories' existence and then transmit this back to your editor. You are arm-





in the second archaeological game, *Entombed*.

Now our hero finds himself aboard a mysterious galleon drifting crewless in a distant ocean. Your mission is to find the captain's soul hidden in the bowels of the ship.

Several nasties attempt to thwart Sir Arthur in his quest — principally the harpies and giant flying spiders. Hidden in one of the rooms below deck is a magic sword which you must find immediately to fight off the energy-sapping nasties.

You begin the quest with 100% energy and this is decreased each time one of the nasties touches you. Energy can be boosted by finding doubloons hidden in some of the rooms.

You need to keep a constant eye on your energy level because if it reaches zero a skull and skeleton's hand appears on screen and drags you off.

As with the other two Pendragon games, mapping is paramount. You need to collect various items as you explore — not all of which are useful.

Critics are going to say that *Black Wyche* is no different to *Entombed*, which in turn was no different to *Staff of Karnath*.

Certainly Ultimate appear to be a bit short of ideas when you look at their recent launches — for the Spectrum as well as the Commodore.

But even if the game is a bit samey it still has better graphics, smoother scrolling, and more pure addictiveness than 99% of the other arcade adventures available for the 64.

If you haven't got an Ultimate game for your machine yet then now is the time. *Black Wyche* is the best of the Pendragon trilogy — you won't want to put down the joystick until you've solved it. E.L

Presentation:	■■■■■
Skill level:	■■■■
Interest:	■■■■
Value for money:	■■■■

ed with a camera and audio recorder that you must use to record the evidence.

At the start of the game you have limited powers — only walk, run, and punch. Various members of the Nexus team must be tracked down and persuaded to train you in additional skills. These are knife throwing, gymnastics, lock-picking, unarmed combat, explosives, and firearms.

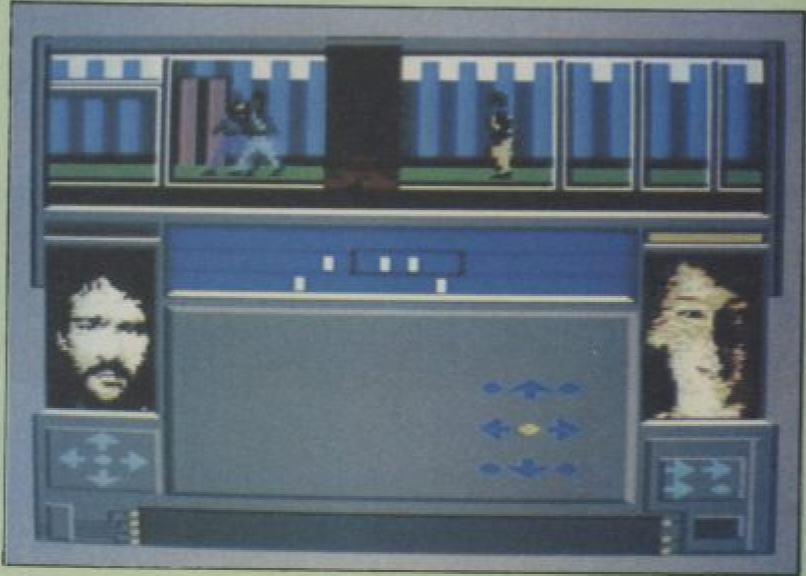
Special training rooms exist within the complex to which you must follow the chosen member of Nexus to learn your skills. The joystick commands needed to master a skill are shown in the central information panel during this training.

The on-screen mission training is not only good fun but saves you the hassle of having to wade through a thick manual.

The graphics in *Nexus* are really superb — reminiscent of *Impossible Mission*. Here you have a good, meaty challenge with some excellent arcade elements thrown in for good measure.

Nexus is a spin-off label from Beyond Software. E.L

Presentation:	■■■■■
Skill level:	■■■■
Interest:	■■■■
Value for money:	■■■■



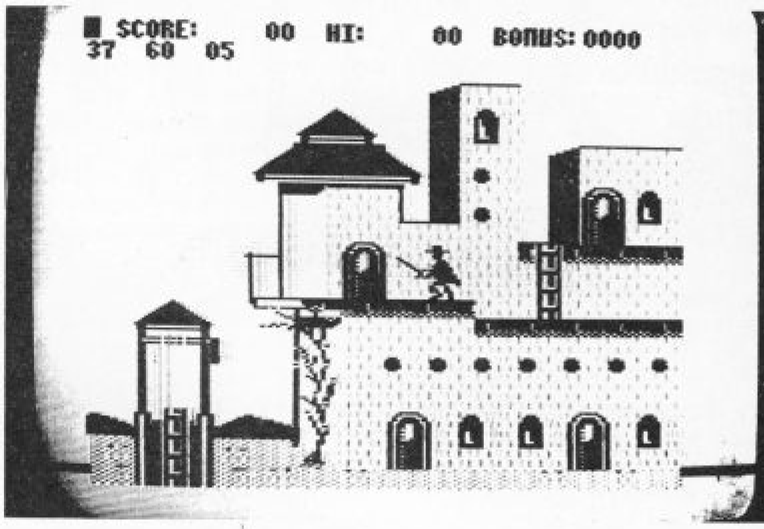
Zorro
Commodore 64
Datasoft
Price £9.95/cass £12.95/disk

Zorro is undergoing something of a revival in the US with a new series of the cartoon strip being released by CBS and the comics all being re-published by the Zorro Corporation.

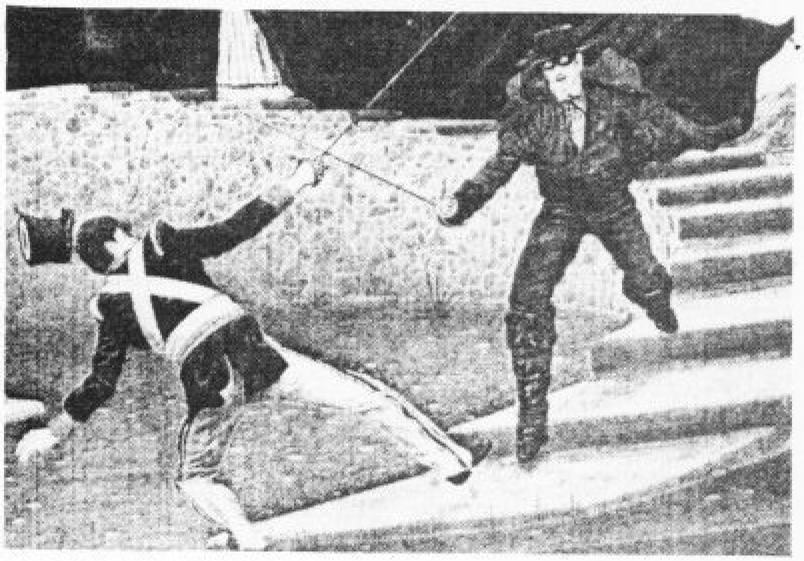
This new wave of enthusiasm for the mysterious mounted swordsman has not gone unnoticed by the software game makers with Datasoft snapping up the software rights.

The game features sixteen screens of arcade adventure in which you have to rescue the maiden who has been carted off to a tower by one of the guards in a desert fortress. Each time you enter a new screen you just catch a glimpse of the guard and girl exiting screen left.

You are armed with Zorro's famous blade which you will need for the various fencing bouts with the guards that patrol the fortress. If you successfully outfence a guard and he falls to the ground there is a flourish of the sword, a swish of air, and Zorro's calling card — the famous Z sign appears on screen.



But in order to rescue the maiden you will need more than simple fencing and mapping skills — you also need to solve several puzzles before you reach the prison tower.



An example of one of these is the bull screen. The mean looking bull is blocking your path to another screen. In order to get past him you have to find a part of the furnace, stoke it up, and brand the animal to keep it quiet for long enough for you to make good your escape.

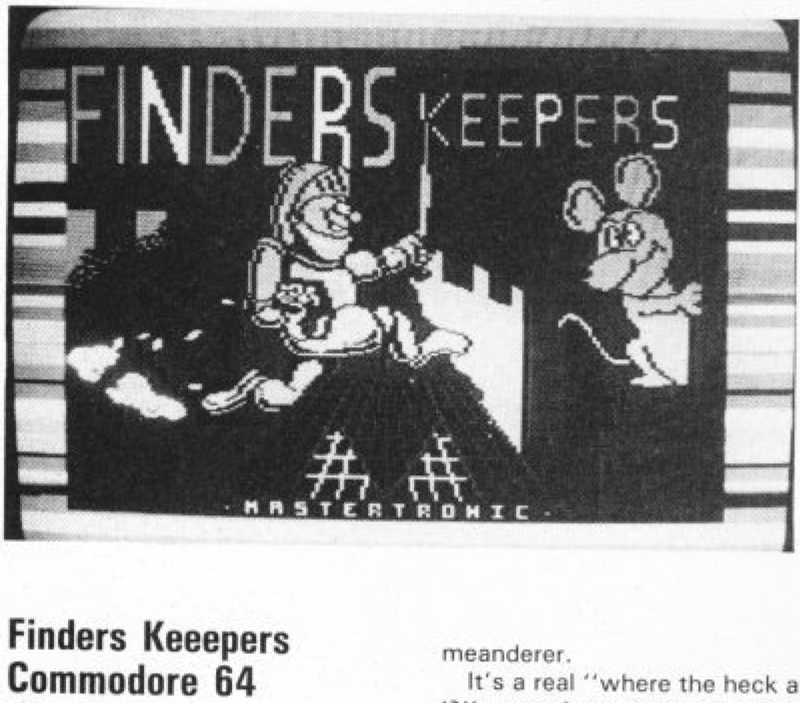
There is also a well that needs to be explored and a number of underground caverns to be visited before attempting your knight in shining armour bit.

Actually attempting a rescue bid without having solved all the puzzles is worthwhile once just to see what happens.

No way am I going to tell you and spoil the fun but you'll be in stitches when you see what happens.

Lots of puzzles and well refined graphics make Zorro a competent computer conversion of the hero's exploits. E.L

Presentation:	■■■□□
Skill level:	■■■□□
Interest:	■■■□□
Value for money:	■■■□□



Finders Keepers
Commodore 64
Mastertronic
Price £1.99/cass

This is not the greatest of games but at the price it's a snip, being a tongue-in-cheek knight errant romp. The opening screen shows the King committing you to scour the labyrinths of his castle and all that follows probes your prowess as a platform jumper and tests your ability as a maze meanderer.

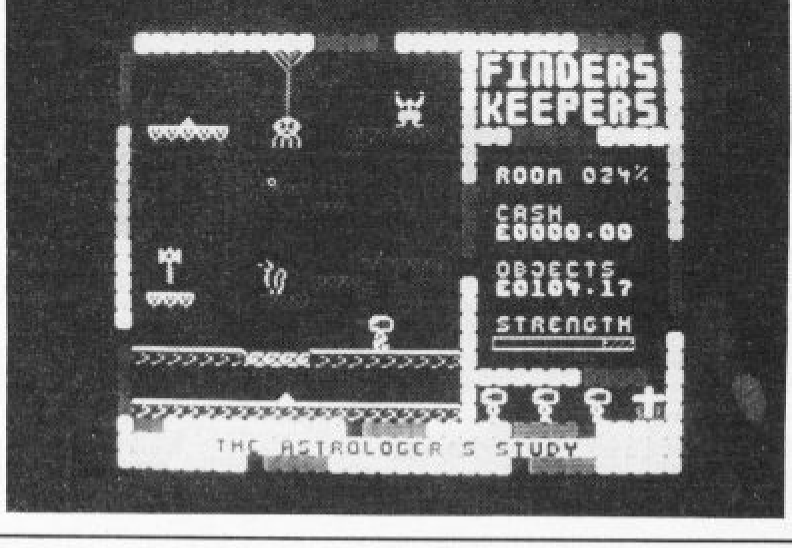
It's a real "where the heck am I?" type of maze as well, spread over several screens — a Hampton Court lookalike for a change. There's no chasers scuttling through the corridors of this dungeon; you're alone save for the prisoners chained to the walls (slimy no doubt) and feeling mighty thankful for the light of the flickering torches. You're on the lookout for various goodies likely to prove a suitable present for the King's daughter and have the ability to examine, get and drop objects.

There are parcels littered about the platform screens also, but here energy sappers such as wobbly balloons and voracious buns proliferate, sometimes accompanied by spectres who are ever ready to trade with you. Apparently the contents of your shopping basket can interact and mutate to form classier merchandise, thus enhancing your score and knightly reputation.

You may either attempt to return to the royal chambers with your treasure trove or sell everything and do a bunk . . . decisions, decisions.

Every platform game seems to demand a slightly different jumping technique according to the whim of the programmer but there is nothing too tricky here for practised players, but worth a quick hop. L.S

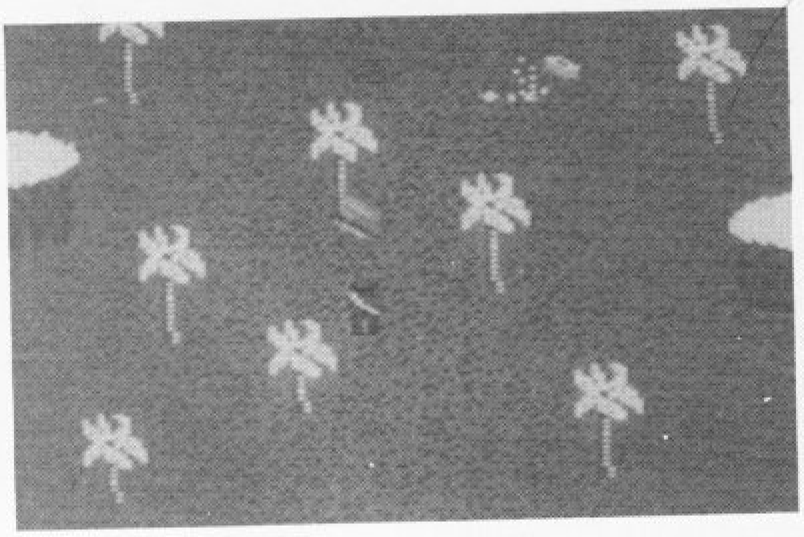
Presentation:	■■■■□
Skill level:	■■■□□
Interest:	■■■□□
Value for money:	■■■■■

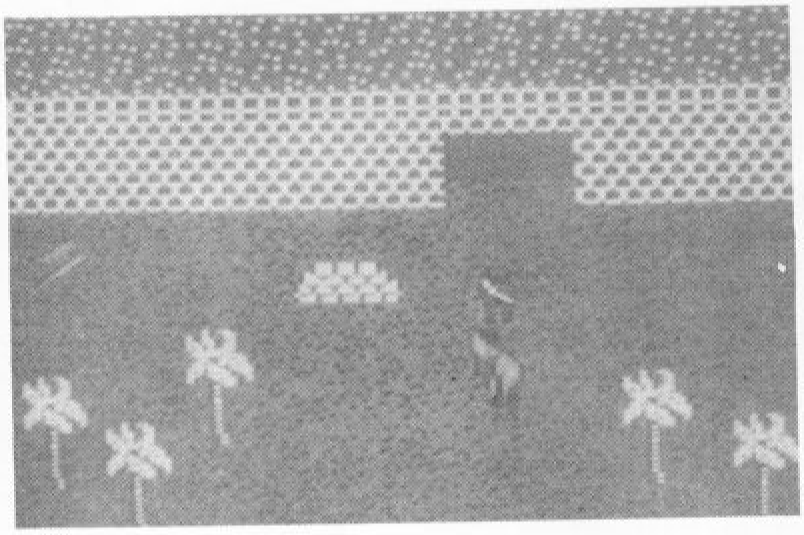


Who Dares Wins
Commodore 64
Alligata
Price £7.95/cass

Originally to have been titled 'Death and Glory' (I thought it was either one or the other), *Who Dares Wins* is Alligata's answer to the Bruce Carver School of Silly Softare. I was lucky enough to get the preview version, so I missed out on all the jingoistic blurb that will inevitably accompany it.

The game itself casts you in the role of uniformed sprite — presumably a crack SAS commando. Area one, where you start out, is a beach liberally sprinkled with palm trees. As you cautiously make your way forward the enemy appear from either side and the top of the screen, which scrolls down as you move along. Some of them run at you, some of them run away, a lot of them don't seem to know where they're going. This makes them relatively easy to pick off. If you shout EAT LEADEN DEATH YOU COMMIE SCUM at the top of your voice, whilst zapping them, it adds to the feeling of realism and generally increases your enjoyment. For those troops concealed behind outcrops of rock, or in trenches, you are supplied with half a dozen hand grenades. But you really need more than six and I kept throwing mine by accident. The enemy do of course fire back but, like in all the best movies, they're not nearly such good shots as you, the hero.

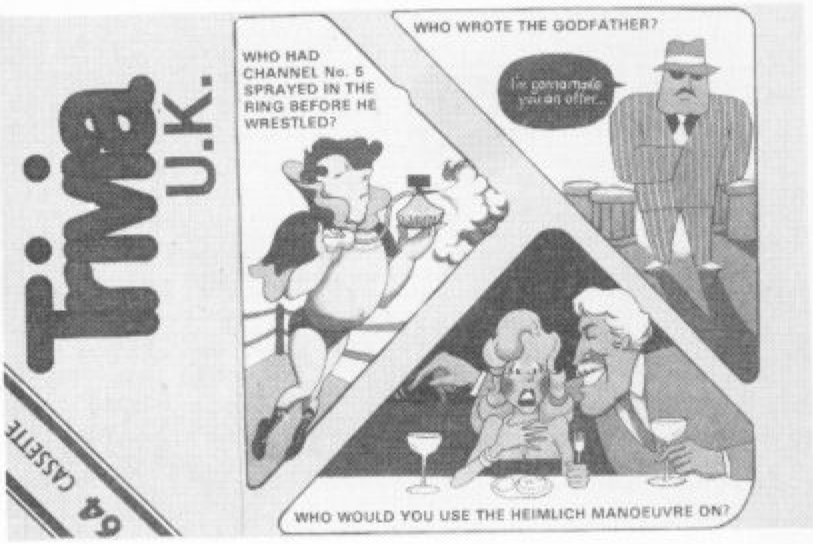




When you've managed to cross area one you get to have a bash at area two and so on, each one gets more difficult not to mention more interesting on the graphics front. In area two there are little lakes to be avoided and a bridge to cross before shooting the legs from underneath the bazooka operator.

You'll have gathered by now that I'm not exactly nuts about these kind of games. That aside, I'm not mad about this one in particular. Whilst the graphics are slightly better than average, the gameplay is nothing to write home about. My advice is stick to civvy street software. **K.M**

Presentation:	■■■□□
Skill level:	■■■□□
Interest:	■■□□□
Value for money:	■■■□□



Trivia
Commodore 64
Anirog
Price £9.95/cass

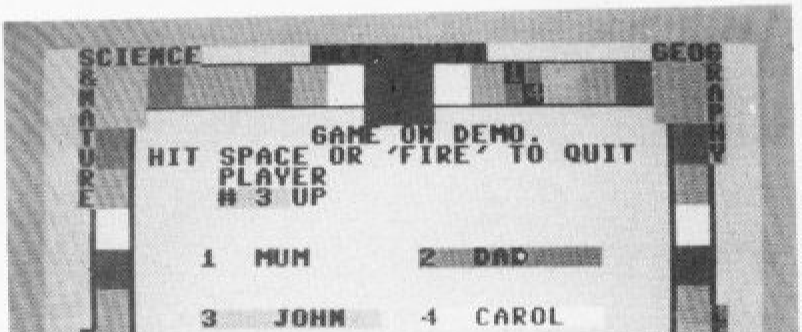
This is the definitive screen version of the board game. It follows that intellectual diversion Trivial Pursuit move for move, with the possibility of 1400 different questions.

If you've been in a coma for the last two years, here's a rundown on the game that put the hype intro trivia. You have a board and everyone has a segment dish. You then go round the board rolling the dice and collecting pieces to fill your segment. You move around and collect segment pieces by answering questions correctly. Different colour squares represent different topics like History, Sport and Leisure and Entertainment.

The board game works exactly like this with the computer rolling a dice for you and moving the pieces. You simply guess aloud and press the space bar for the answer, then you tell the machine if you got it right. Your opponents will, of course, stop you from cheating.

I've no real complaints about this at all. Minor problems are that it's a bit slow, especially as you wait for the question to be printed out on the screen, but I suppose the board game's a bit slow as well. The questions are all suitably trivial and that, after all, is the whole crux of the game. It's certainly a much better attempt than US Gold's yankee imperialist affair. It weighs in at less than half the price of the board game so it has to be great value. Should prove great entertainment for those long winter nights and post-Christmas dinner occasions. **M.P**

Presentation:	■■■□□
Skill level:	n/a
Interest:	■■■■□
Value for money:	■■■■■



Evesham Micros

THE UTILITY SPECIALISTS

Freeze Frame

THE NEW GENERATION OF BACKUP METHODS HAS ARRIVED

"Freeze Frame" is the product that '64 owners have been waiting for. At the flick of a switch **"Freeze Frame"** will take control of your computer and freeze the program in memory, allowing you to **SAVE it to tape or disc**. The uses are endless, but typical applications are . . .

TAPE TO DISC: ANY program can be frozen and **transferred to disc** regardless of the type of loading technique used. (Disc save incorporates a fast loading system.)

DISC TO TAPE: ANY memory resident disc program can be backed up onto tape. (Choice of normal or turbo save speed.)

DISC TO DISC: It is possible to make a self contained back up of disc based programs that will both **load at high speed** and **allow the rest of the disc to be used as normal**.

TAPE TO TAPE: Tape back ups can be made at turbo speed with just one tape deck.

In fact **"Freeze Frame" will FREEZE any program** that is memory resident, and allow you to make a back up of that program onto tape or disc. The beauty being that the saved version can be a fast booting single file. The process is **completely automatic**, no knowledge of BASIC or machine language is required, just follow the prompts and the simple instructions for **100% success**.

"Freeze Frame" is a hardware "device" that plugs into the cartridge port of the '64. It does **NOT** dump the entire contents of memory, just the **working program**. Programs converted run **independently** of the hardware.

ONLY £39.95

WARNING: Don't be mislead by other adverts, if you want to transfer turbo load programs to disc, software only utilities are **inadequate**. They suffer from a variety of drawbacks including poor success rate, awkward to use, greedy on disc space and overpricing.

DISC DISECTOR V3.0

Now the ultimate disc copying and utility program for the CBM 64 with 1541 disc drive has been **improved even further**. As well as general improvements plus the addition of some useful utilities two important new programs have been added.

The Evesham Nibbler

This is the first copier of its kind to appear on the U.K. market. It is a **true nibbler** (byte for byte) copier that will copy **ALL DOS errors automatically**. This includes DOS errors 20–29 inc. plus non standard errors like half tracks, extra tracks, non standard sync. renumbered tracks, etc. They are all treated as normal work. No knowledge is required at all it just **"nibbles away"** and produces a perfect copy. Yet it **only takes eight minutes**. Has copied **all discs tested** (except itself). A **class above** anything else available.

Fast File Copier

An **incredibly handy** selective file copier that LOADs and SAVEs at **five times** normal speed. Sounds useful? You won't believe how much until you have used it.

As well as these programs "Disc Disector" incorporates a whole host of useful utilities including the following. **Fast Format**, **Selective Menu Maker**, **Disc Editor** (new sophisticated machine code version), **Scratch/Unscratch**, **Fastcopy**, **Rename**, **Fastload** (four times faster), etc. etc.

This program is an **essential purchase** for the 1541 user.

ONLY £29.95

Customers with earlier versions may return them along with £9.95 for "V3.0".

Quickdisc+

Get a **QUICKDISC+** cartridge plugged into your '64 and your 1541 will really **start to perform**. So many features per pound (sterling) that you will hardly believe it. Includes the following . . .

Fast LOAD <u>and SAVE</u> (four to five times normal speed). Works with most protected software. Can be switched in and out from the keyboard.

Fast Format takes just 10 seconds.

Fast Backup copies an entire disc in four minutes. (Not heavily protected software.)

Fast File Copier for selective fast copying.

Improved DOS commands (DOS 5.1) makes for easy use of the disc drive. e.g. $(RETURN) will LOAD and display a directory without overwriting BASIC. SHIFT RUN/STOP will LOAD "0:*",8,1 etc. etc. Very, very useful.

Incorporates Centronics printer software (user port) **with CBM graphics** capability. See "Commodore Connexion" for suitable lead.

A RESET switch is fitted. (We have found this to be "unstoppable". It also preserves the tape buffer.)

NO MEMORY IS USED by this cartridge, it is totally "transparent" and uses special switching techniques.

Now the price. No, not £49.95, it's **not even half** that much. Can you afford to be without QUICKDISC+

ONLY £19.95

No extra connections are necessary with QUICKDISC+ and unlike most similar products it is compatible with printers and second drives.

DOUBLER

The tape back up "device"

Doubler has been an **enormous success** and continues to sell very well. Why? Because it is the **best product of its type** on the market. Doubler uses a unique method that copies **all types of software** regardless of speed. It consists of **hardware and software**. The software is the key part as unlike other products of its type Doubler creates a **brand new machine copy**. It is very easy to use and very successful. In fact our tests **have proved** that this "device" can achieve **100% success**.

Requires access to two data recorders.

ONLY £12.95

Why settle for less—this is the best.

HARDWARE SPECIALS

STAR SG10C
Commodore ready printer. **120 cps or 40 cps in near letter quality mode**. Friction and tractor feed. **ONLY £255.00**

1541 DISC DRIVE
Buy the 1541 disc drive and get the **Commodore communications model (value £99.95)**. **Easyscript and six games free of charge** **ONLY £219.00**

DISC NOTCHER
New handy tool allows you to punch a second write protect notch in your discs. **Double your disc capacity** by using both sides of your discs. **ONLY £9.95**

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Hit And Miss
Commodore 16
Venturegate
Price £5.95/cass

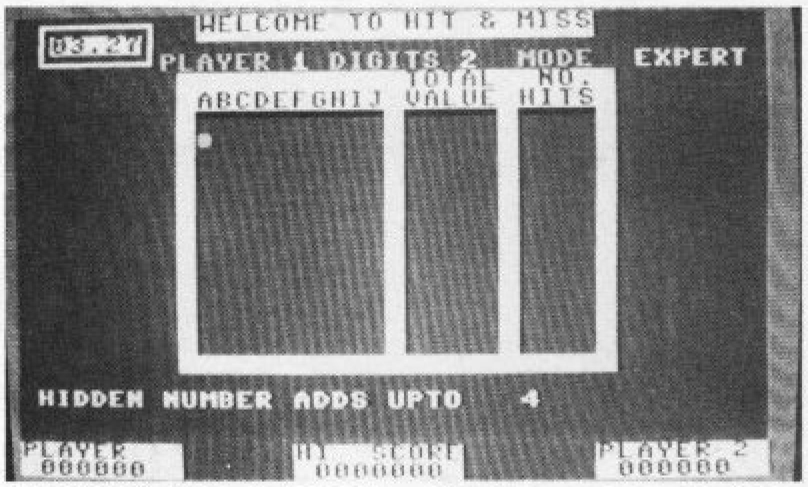
What you might call an interesting little number, or might not, depending I suppose, on exactly where your interests lie. *Hit And Miss* is one of those 'mastermind' type games where you attempt to guess a computer generated number sequence.

You can play on your own or try and prove your intellectual superiority over an opponent, a younger brother or sister strikes me as a fairly safe bet.

To start with things are fairly simple. The C16 thinks up a two digit random number and you have several bashes at guessing what it is. To help you out you are given various useful clues like what the digits in the secret number add up to. You are told how many digits you have guessed in their correct positions and their total value when added together.

This is more useful than it sounds as it enables you to determine which numbers you guessed correctly. Finally, you are told exactly how many of the digits in your guess are in the hidden number. By now you're undoubtedly thinking that only a complete and utter drongo would find such a task intellectually stimulating, and you'd be dead right. But things get more difficult. When you've guessed the two digit number you get a three digit one to fathom and so on up to ten digits.

After each correct guess you get a sort of progress report. This includes the total time taken, number of moves, your score



and intellect rating. I played in starter mode, but the more ambitious will probably move on to skilled or expert modes which offer less information on the validity of your guesses.

If I slag this off I'll probably be branded as a mindless moron whose idea of an intellectually stimulating program is Crossroads. All the same I don't think it will have a wide appeal. K.M

Presentation:	■■□□□
Skill level:	■■■■□
Interest:	■■□□□
Value for money:	■■■□□

3D Glooper
Commodore 16
Audiogenic
Price £4.95/cass

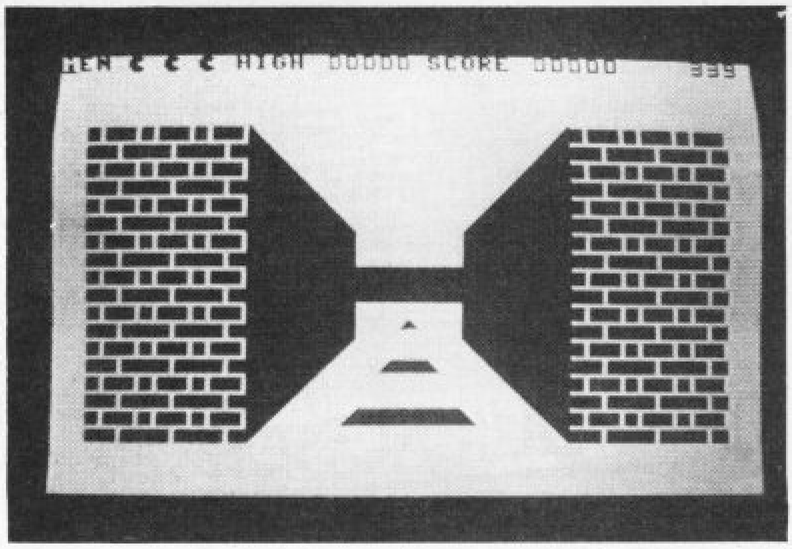
Remember Pacman? Well, *3D Glooper* isn't anything like that. Actually it does bear a passing resemblance. Glooper is a maze game in which you have to roam around picking up dots whilst at the same time avoiding the gloopers — little monsters out to munch you to death. There is the odd red dot lying around here and there and if you pick up one of these the gloopers become all weak and feeble for a short time enabling you to munch them.

There the similarity with Pacman ends. What makes Glooper different is that it is 3D. Not much of a distinction you might think, but it does make it a lot more interesting. There are over three hundred dots to collect off the maze floor, I haven't managed it yet, but given another hour and a more cautious approach I'm sure it won't prove too difficult.

The radar makes things a bit easier. When the gloopers get too close for comfort a warning bleeper sounds off. Pressing F1 displays a sort of short range map showing what gloopers and dots are where in the immediate vicinity.

On the whole a hard game to criticise. The graphics are about par for the 16, 3D mazes always look a bit montonous because they're program generated.

I was going to say don't bother



with Glooper if you've already got a 3D maze job, but I can't recall having seen another one on the 16. K.M

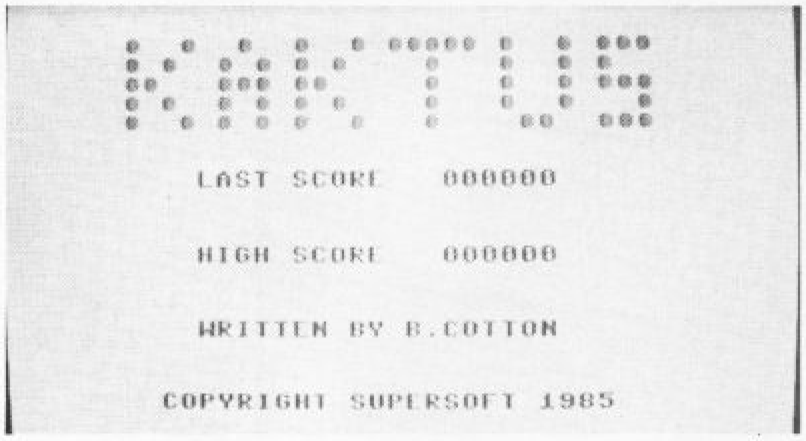
Presentation:	■■■□□
Skill level:	■■■□□
Interest:	■■■□□
Value for money:	■■■□□

Kaktus
Commodore 16
Audiogenic
Price £4.95/cass

I'll be honest. There's a tendency when reviewing C16 games to make allowances for the software because of the machine's limitations. You find yourself saying 'what do you expect with only 16K and no hardware graphics support'. But then excellent games have been produced on the 16, the *Berks* trilogy for instance. *Kaktus* doesn't come into that category, though it's by no means bad either.

To describe it simply, there's a cactus (cactus ginormus to be precise) smack in the middle of the screen. There are hordes of wasps and hornets bearing down on it aiming to munch it to bits. You, the budding cactophile, must save it by blasting the bugs out of the sky. Simple as that.

There are a few added problems. You must protect the cactus on both sides and you can only do this by going underground, no problem as you can easily re-emerge through ahole. Except there's a mole who keeps blocking them up. Also, the wasps drop stuff all over the place (I'll leave it to your imagination to guess what it is), contact with this is deadly. Not surprising when you see what it does to the ground. Oh, I almost forgot. After a while this buzzard appears and drops eggs on you, this has the same effect as the wasp do.



So there you are. It's a straight fight between you and the flatulent wasps for control of the Kaktus. At the end of each screen bonus points are awarded depending on how much of the prickly plant you've managed to salvage. A pretty elementary game, but one that will appeal to the less experienced maybe. K.M

Presentation:	■■■□□
Skill level:	■■□□□
Interest:	■■□□□
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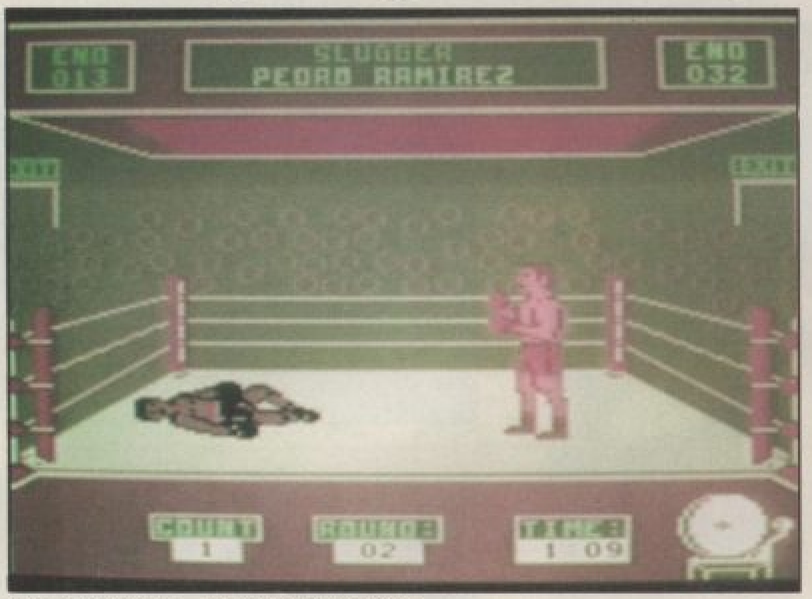
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McGUIGAN —The Big



It's a knockout — next step McGuigan.

Barry McGuigan World Championship Boxing
Commodore 64
Activision
Price £9.95/cass £14.99/disk

The McGuigan game takes itself a bit more seriously than the Bruno one, but that doesn't automatically mean it's a better game.

Its scope is certainly larger. You get more than twice as many opponents and the option to create your own boxer. Thus at the beginning if you choose to build a new contender you change his colour (skin and kit) and his type. You can choose from 'slugger', 'nice guy', 'bulldog' and 'boxer' among others. I can't really help you as to who to pick. Let's face it nice guys don't win so you may as well go for boxer, it looks like a sensible option. In fact though I can see that once you're fighting it makes an enormous difference.

Don't expect to be squaring up to Barry straight away either. There's a lot of work to be done before you get the big fight. Even before you meet your first opponent you need to note your strengths and weaknesses on the profile screen. If you're low on endurance and strength by the time you get to your training screen you'd better do some road running and weights. The training screen doesn't really have you doing much but allocating weeks to certain areas before the fight. You normally get 8-12 to prepare.

Endurance is the key. This is your energy level, and when it gets low because you've taken too many punches you run the risk of getting knocked down. Two indicators at the top of the screen indicate the levels. I have a whinge here. Everything you do saps you, taking punches and throwing them, so by the time you've gone a couple of rounds your level is so low that you punch yourself out until he lands one on you. This seems unfair because your opponent always goes down slowly.



McGuigan celebrates but Bruno wins on points.

THE RESULT

It was, of course, a split decision, but after consultation the judges have decided. And sensationally the referee's holding up Bruno's hand. McGuigan doesn't look too pleased about it, but the judges felt that Elite's version was a touch more playable than Activision's. Seriously though, both games are of high quality and you must make up your mind whether you want the arcade action of Frank Bruno or the nicities of McGuigan.

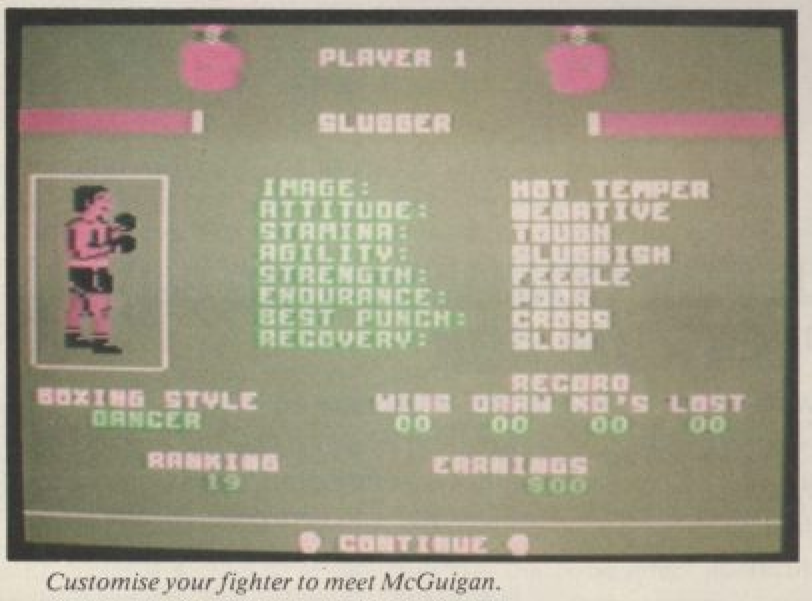




Elite say Frank Bruno will be "filled in" in the graphics of the final version. I wonder if Frank knows?

The graphics are excellent. The boxers are big and possess features, they move fluidly and punch realistically. Joystick control is a little more sophisticated as well. You have two modes: inside and outside. The former operates with the fire button depressed and you use this at close quarters with your opponent.

So it's been a close fight that's gone the full distance. What's the decision?



Customise your fighter to meet McGuigan.

VS BRUNO

Fight –

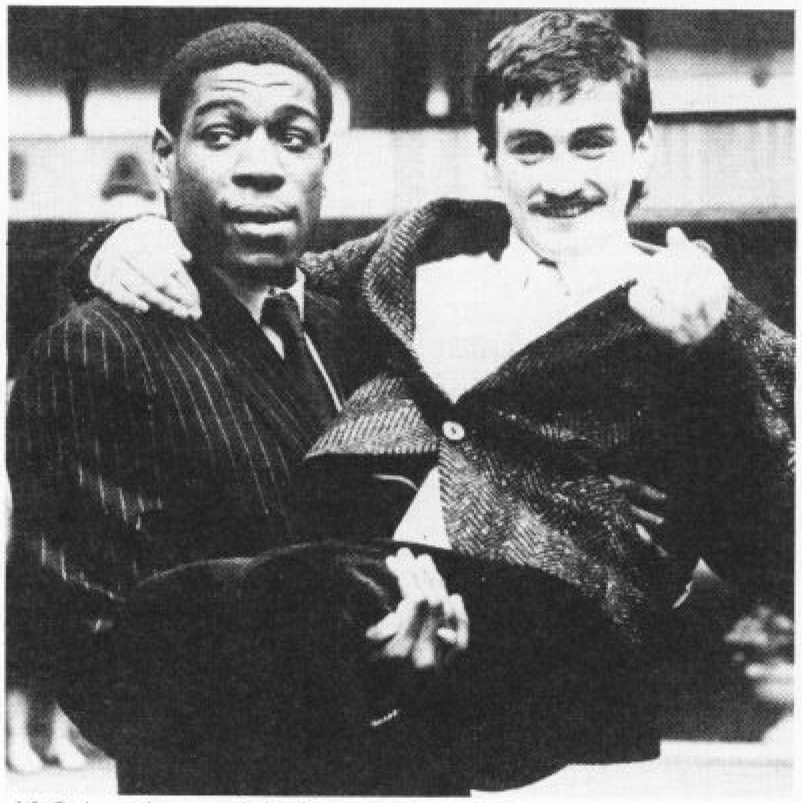
Frank Bruno's Boxing
Commodore 64
Elite
Price: £7.95/cass

Here it is fight fans, the bill of the decade. The 70's had Frazier and Ali slugging it out in the 'Thriller in Manilla' and now Commodore User has brought two of Britain's greatest boxers together to battle it out for a massive purse. Frank Warren ain't got nothing on us!

Elite's offering is a faithful reproduction of the arcade favourite Super Puncher. The only difference is that the 64 version features three more boxers than the original.

As Frank Bruno you must fight eight opponents to reach the top. The emphasis is very much on keeping the flavour of the arcade version's humerous approach intact. So your man in the opposite corner retains the kind of characteristics he possessed in Super Puncher. You begin against the Canadian Crusher an enormous brute of a bloke built like a lavatory wall. He's stronger than a gorilla and marginally less intelligent. You shouldn't have too much of a problem knocking him down (unless you're more stupid than he is).

After decking the Canadian Crusher you've got to work your way through the other seven pugilists, beginning with the crafty oriental Fling Long Chop and ploughing on through the cool Russian Andrapuncheredov, the mean Tribal Ttrouble, Frenchie France the smooth Frenchman, Ravioli Mafiosi the pasta-gutbusting Italian, Antipodean Andy the uncouth Aussie and finally Peter Perfect the faultless American bore.



McGuigan chances a left whilst Bruno calculates the royalties.

You don't just need to improve your style and reactions on the way to the top. You have to learn some hard lessons as well. Each one of your opponents has a speciality that is likely to have you flat on your back. For example old Fling Long Chop bounces off the ropes and kicks you in the teeth! When Tribal Trouble's eyes start to narrow and he gets an evil glint in his eye you'd better duck because he's going to nut you.

The controls are effective. You're best off controlling Frank with joystick stuck to the table and using keys 1 and 2 to punch. The character moves well, rolling and shifting left to right like a good 'un. You knock someone down by getting the energy level down. You need three knock downs inside three minutes for a result. You must adopt different styles for each boxer. I don't think I'm giving too much away when I say switching between body and head blows is enough to despatch the Canadian Crusher.

The graphics deserve a special mention for their clarity and sharpness — almost as good as the arcade version. Neil Bate deserves praise for the quality of his work. I particularly like the way the sweat flies off when they take it in the head.

PRIZEFIGHT COMPETITION

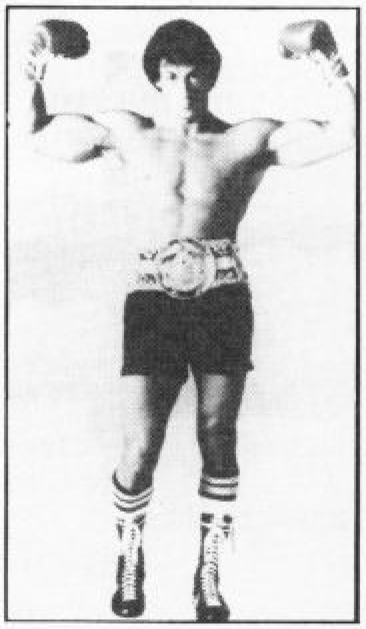
You've seen the reviews, now enter our competition and win yourself the winning game. Elite have agreed to put up a purse of thirty Frank Bruno games. That's thirty chances to win! Now the hard bit. Since we're so kind normally, we thought we'd set a bit of a toughie this month. Can you name the three actors pictured and the three boxing films they starred in. Oooh that's tough! (Big clue: one is not really an actor!)

Send your answers to Boxing Competition, Commodore User, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. Entries to reach us no later than 20th October.

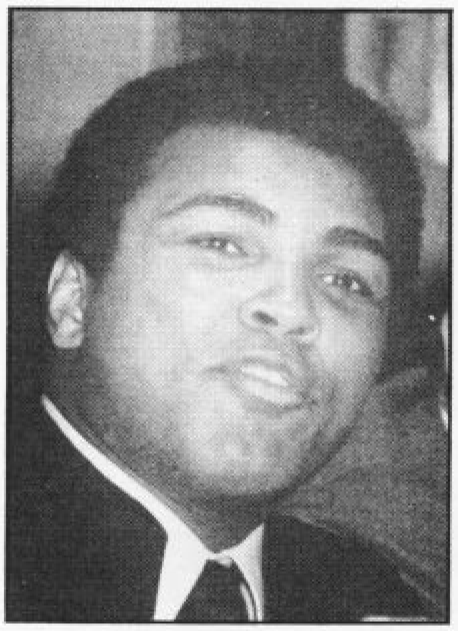
A



B



C



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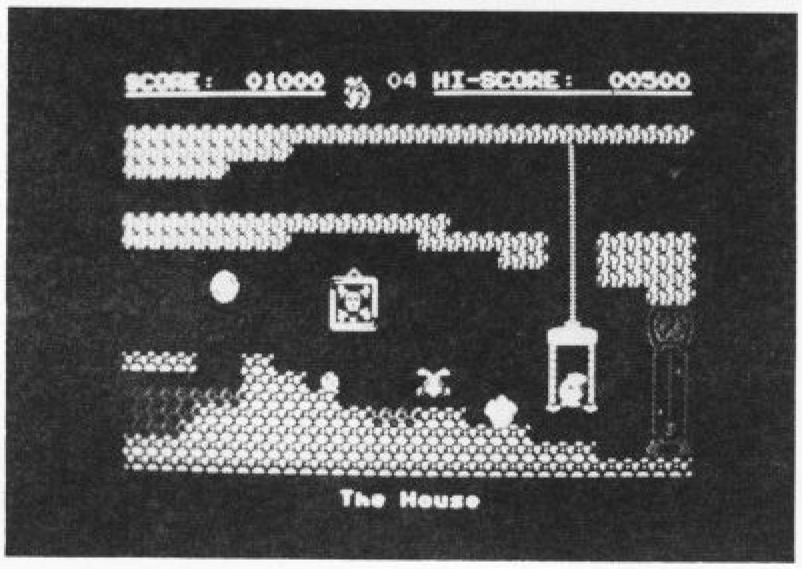
Monty On The Run
Commodore 64
Gremlin Graphics
Price £9.95/cass £11.95/disk

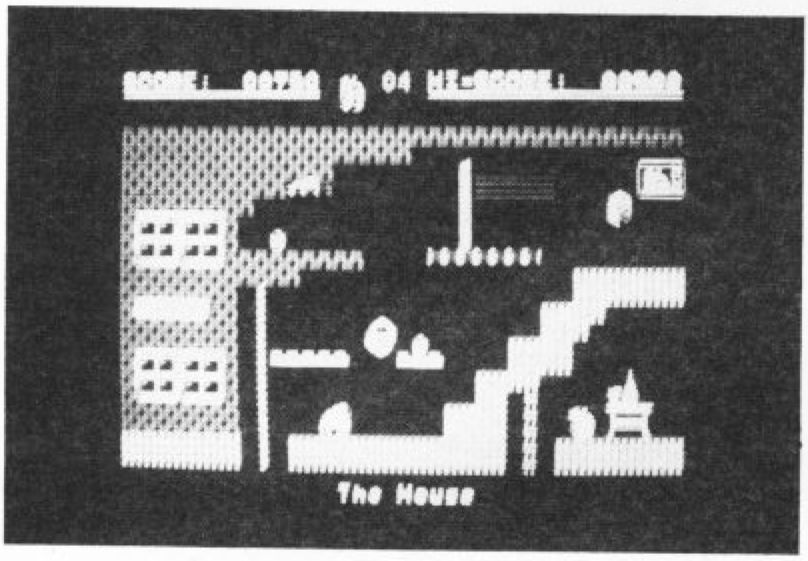
How does the idea of another platform game à la *Jet Set Willy* grab you. It doesn't sound too exciting I'll admit, but *Monty On The Run* is quite simply the best platform game I've seen in a long while.

Probably the best thing about it is the music, a word you couldn't use to describe the irritating noise that accompanies so many similar games. Yes, Monty has Real Music, it's actually got a beat. Probably the best I've heard on the 64.

Eager followers of the exploits of Monty Mole will be aware that after a period on the run he was captured and sent down for a spell. Unable to bear the strain of prison life he escapes — this is where you come in.

First of all you have to pick up your freedom kit. This consists of five items that will come in useful in your bid for freedom. There are twenty-one items to choose from, including a gas mask, passport, gun and hand grenade. Which five you take is up to you. Suffice to say that some are essential, others utterly useless.



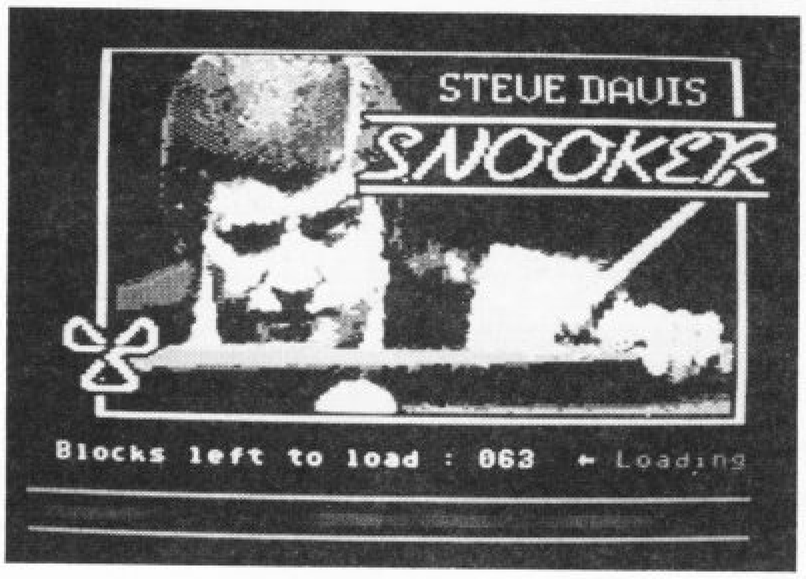


There's not much point in describing the various screens in detail because if you've seen one platform game you've seen them all. What is worth pointing out is that the quality of the graphics is brilliant as is the imaginative use to which they have been put. So as well as the standard teapots, fried eggs, waving hands, flying clocks, etc. there are some nice touches like olde worlde lifts and incredibly realistic transporter beams. (By which I mean this is how I'd expect them to look if there were such a thing.)

By the way, the object of the game is to get to the boat and make your escape to another country. One that, presumably, doesn't have an extradition treaty.

Monty On The Run isn't the best platform game ever invented in the history of the universe, but it's not far off. The only thing I can see putting a dent in its popularity is the ten quid price tag. Ouch! K.M

Presentation:	■■■■■
Skill level:	■■■■■
Interest:	■■■■■
Value for money:	■■■■□



Steve Davis Snooker
Commodore 64
CDS Software
Price £8.95/cass

There's a little button on the cassette inlay which says 'World Number 1'. This, I presume, is a reference to the software rather than its sponsor, lately fallen to the rank of runner-up, though as CDS have been working on this game for a long time now it might have been true when they began. I remember seeing the prototype at the 1984 PCW Show.

The loader is worth a mention, incorporating a picture of Steve 'boring' Davis, as he's known in the game, scrutinising a shot from the bottom cush — real Pot Black stuff. Then they go and ruin it all with — you guessed it — horrible 64 bip bip muzak of the worst kind possible, eeuurrrgghh! I hate it. Why do they do it? It adds nothing whatever to a game of this sort. CDS wouldn't put it on their Colossus Chess program, so why snooker?

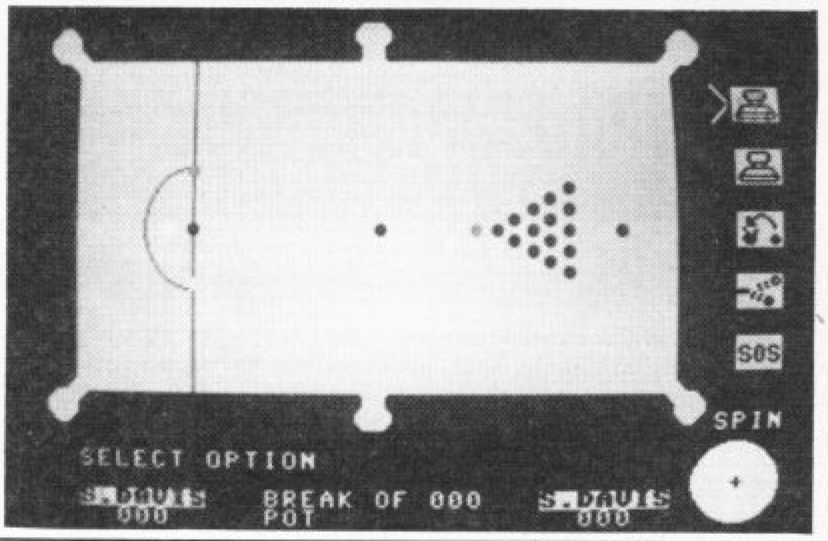
Anyway, with that one exception, the game itself is very good. You can play a mate, or the 64, or the 64 will play itself. In a straight game you position your shot with a small X cursor. You can then decide how much spin to impart by positioning the same cursor on a sort of enlarged cue ball icon at the bottom of the screen. Strength is indicated by a horizontal bar at the bottom of the screen and can be adjusted with the joystick. I was quite impressed by the realistic behaviour of the cue ball, although it didn't always go where I expected (it doesn't when I play the real thing).

There are nine skill levels. I found after a few practice games that about level five or six gave pretty reasonable competition. Level nine is a good laugh, you don't get a look in. The 64 pots balls from near impossible situations with the most ridiculous trick shots. Highly suspicious if you ask me.

If you're tired of playing there's an edit function with which you can set up special positions, trick shots etc. or just practice.

This is without doubt the best snooker/pool simulation around. The only thing that would put me off buying it is having Steve Davis' ugly mug plastered all over the box. K.M

Presentation:	■■■■□
Skill level:	■■■□□
Interest:	■■■□□
Value for money:	■■■□□



Bryan Robson's Super League
Commodore 64/board
Paul Lamond Games
Price £19.95/cass

Something I'm surprised hasn't appeared on the scene much sooner is the board game which uses a micro for various functions. The kind of thing I had in mind was rolling the dice, keeping score, being banker if money's involved, that sort of thing. Super League is one such game, and as far as I know the only board game around which involves using the 64.

For your twenty odd quid you get the following: One cassette tape containing game software, about two million quids worth of funny money in notes of various denominations, eight arthritic looking plastic footballers, some player cards, chance cards and match day cards, a pair of dice and of course the all-important board.

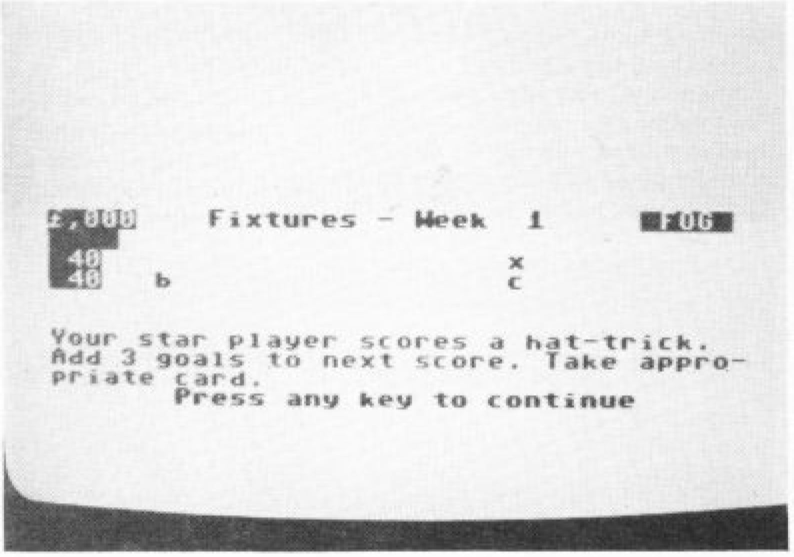
All this comes neatly parcelled in a shiny black box with pictures of Bryan Robson all over it. Bryan appears in the main photo with a young woman and two kiddies, the idea being here's Bryan enjoying a game of Super League with the wife and kids during the half-time interval. In reality I suspect the only thing Bryan has in common with the other participants is that this is the only occasion in his life he's ever likely to be within three feet of a Super League board. Of course we all know the real reason Robbo's here is not because he thinks Super League is the best thing since screw-in-studs, he's getting paid for it. And what's wrong with that? I've suspected for some time now that Ian Botham doesn't eat Shredded Wheat.

As for the game itself. Well, between two and eight people can play, though I suspect that with any fewer than four it would be terminaly boring. Each player is manager of a team, represented on the board by one of those arthritic looking footballers.

You can call your team what you like, (plenty of scope for arguments here) and the team names are entered into the 64 before the game starts. Another thing that happens before the game starts is that each player/manager gets fifty grand and three player cards.

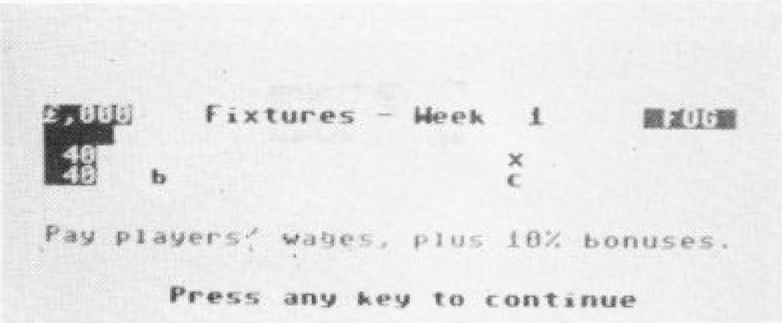
The first thing everybody has to do is get to the ground where their fixture is due to be played. You can do this by road or rail. Rail is more expensive, but faster, (exactly how fast depends on the dice) and there are advantages in getting to the ground quickly. If your opponent doesn't turn up by your next go you can buy another player *(just like Spurs — M.P.)* the advantages of this will become apparent. There are a couple of things which can happen on the way to a ground. Namely landing on a yellow or blue square.

Yellow squares get you a chance card, or more precisely chance message as the computer provides it. Like in Monopoly chance cards can be good or bad news. Generally speaking they either gain or lose you time or money. Hence, your coach driver may find a short cut and you can throw again. Alternatively, your star player may criticise you in the press and you will be forced to sell him to the bank at half value. Landing on a blue square can only be good news as you get a match day card. Match day cards say things like 'a huge clearance from your goalkeeper has eluded your opponents goalkeeper. Add one goal to your score'. Pretty realistic eh? You don't actually get to use match day cards until the game itself.



When all the managers have made it to the respective grounds it's match day. Each team must play the opposing side according to the programme drawn up by the 64. A game is actually played by each manager throwing the dice. Remember the player cards? Each player has a points value which is added to the dice score. There are a few restrictions on players. If you have two with the same number (i.e. position) they can't both play. Also the computer gives the prevailing weather conditions and some of your players may not be able to play in certain conditions. Pathetic if you ask me, it wouldn't have happened in Jack Charlton's day.





Finally you get to play a match day card if you have one, but your opponent of course has the same opportunity. Then it's a question of converting the points into goals by means of the table on the board. I must admit I found this a bit confusing. For instance: 12 points get you 2 goals and 16 points get you 3, but what if you get 14 points? You can't have half a goal can you? The instructions offer no guidance here at all so I suggest you either make up your own table or round the total down if you're in the middle.

When you've worked out the score it's fed into the waiting 64 as are all the other teams' results. The computer then produces a league table, works out the following weeks fixtures and off you go again. When everybody's played everybody else twice the league champions are declared. I haven't included everything but the essential elements are all there. Having actually played it my conclusions are that Super League is an average board game to which nothing has been added by the use of the computer. Which, when you think about it is a shame. Marrying computer and board is a good idea. The computer can take care of the tedious calculative processes like banking and keeping score. This has the added advantage of cutting out the possibility of cheating. The board adds an element of social focus that's somehow lacking in computer games which are more an individual pursuit.

I think Super League fails on both counts. The 64's potential has been vastly under utilised and the game itself just doesn't come up to scratch. **K.M**

Presentation:	■■■□□
Skill level:	■■□□□
Interest:	■■□□□
Value for money:	■□□□□

Now Games
Commodore 64
Virgin Games
Price £8.95/cass

Compilation tapes are all the rage now with two major releases out this month. The success of the Softaid compilation was not missed by the software houses, it seems.

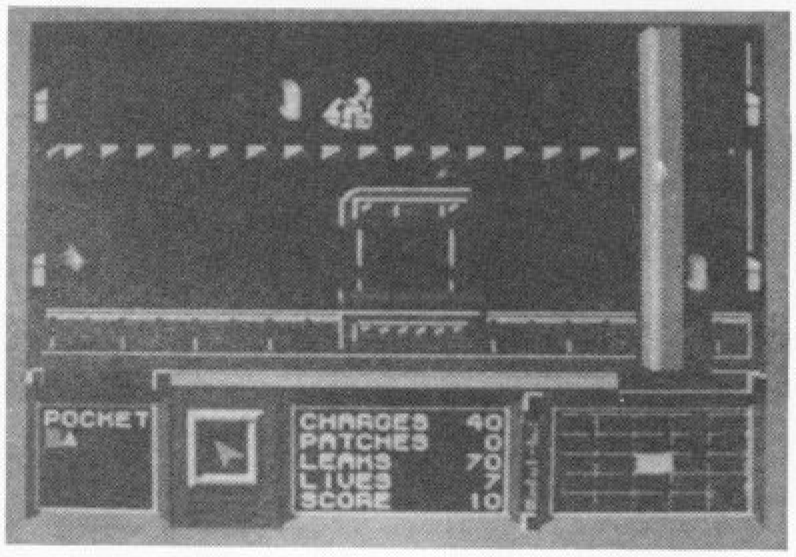
I can't help being concerned about these tapes I must admit though. I don't understand the economics of a game that takes a team of programmers six months to write only having a shelf life of two months.

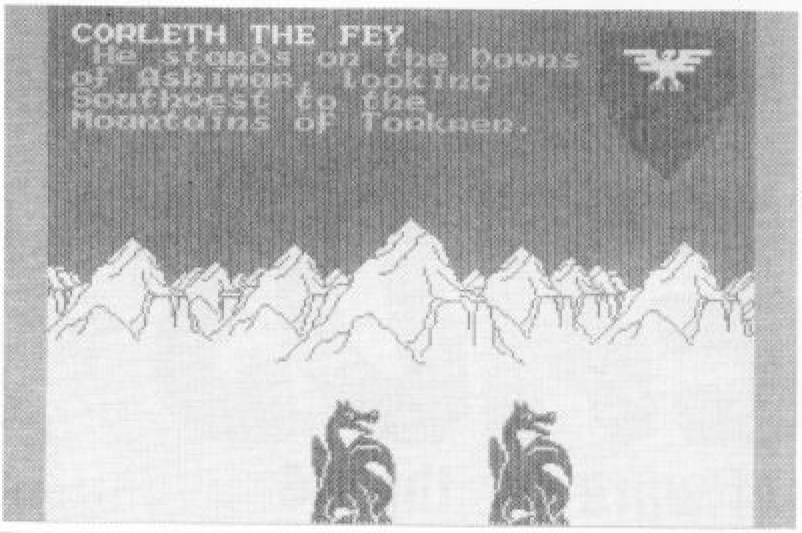
If you can get a comparatively new game on a compilation with four or five others for less than the original price of one then why bother buyng new games at all?

If you lot did decide to do just that it would be bad news for the software houses who would lose the revenue they need to pay their programmer's wages.

Whether it's good news for the software companies remains to be seen but one thing is for sure. In the short term at least its good news for the games players.

Now Games is the best compilation tape to be launched yet with two Commodore User Screen Star games on it and four other excellent titles as well.





Best game on the tape is Beyond's excellent *Lords of Midnight*. This game dragged the war game out of the boring realm of moving armies around maps and juggling with statistics.

The land of Midnight is vividly created with text and graphics. You actually move through it in your battle against Doomdark thanks to a new programming technique developed especially for the game — Landscaping.

Second Screen Star game is *Strange Loop* — one of the best arcade adventures launched this year. A deserted space factory is completely out of control.

You have to explore the hundreds of different rooms collecting ojbects that you will need to solve some of the puzzles.

There are three other excellent arcade adventures on the tape — *Brian Bloodaxe* from the Edge, Mikrogen's *Pyjamarama, Tales of the Arabian Nights* from Incentive and the super fast shoot 'em up — *Falcon Patrol II.*

At £8.95 Now Games is just too good value for money to be missed. Buy it now. **E.L**

Presentation:	■■■■■
Skill level:	■■■■■
Interest:	■■■■■
Value for money:	■■■■■

Hunter Patrol
Commodore 64
Mastertronic
Price £1.99/cass

The old saying "You get what you pay for" is an inarguable truism. *Hunter Patrol*, one of the Mastertronics £1.99 range, is certainly good value at the price but, while playing the game, it's hard to forget that these days £1.99 does not buy a lot.

The object is to fly your plane, avoiding various obstacles along the way, ever onwards. A pointless exercise? Absolutely! Ignoring the rather primitive graphics the major failing of this game is a lack of ultimate objective and any kind of real climax or variety.

The initial phase has you weaving between the oncoming enemy aircraft, destroying what the inlay calls 'ground based defences' — in this case tanks. To make things more interesting the tanks fire at you. Two complaints here. The gun doesn't fire quickly enough. This kind of game relies, or rather should rely, heavily on fast action of the most violent kind imaginable. It's just not on to have to wait five seconds in between destroying things. Secondly, I know I hit a tank several times and it didn't blow up. Still, by the same token I hit at least half a dozen by accident.





When enough tanks have been turned into so much twisted metal, you get to have a bash at a different kind of 'ground based defence'. The second lot looked disconcertingly similar to red cross ambulances — I was only obeying orders. Four sets of ground based defences later you get to have a go at strafing the building, (no doubt the hospital or local school). The greater the damage inflicted the more bonus lives you get to carry through to the next phase. Which is? Doing it all again with the speed knob turned up.

Not a bad effort at a standard shoot 'em up, but there are half a million others like it. It's cheap, but I'd rather have one good game than four of these. **K.M**

Presentation:	■■□□□
Skill level:	■■□□□
Interest:	■■□□□
Value for money:	■■■□□

Talking games have grabbed their fair share of chart toppers this year. Our American sound expert, Tom Jeffries, went to Berkeley, in California, to talk to the freelance sound specialists who put the chat into *Ghostbusters*, *Impossible Mission*, *Beach Head II*, and *Kennedy Approach*.

TALKING HEADS

By Tom Jeffries

Talking software for the 64

The latest thing in game software today is speech synthesis. So many games on the market these days use synthesized voices that I decided to find out who was responsible for all this digital eloquence, why software companies are finding it worthwhile to include speech in their programs, and where it is all headed.

Back in the days when computers were enormous, expensive machines available only to people in large universities and corporations, the intellectual challenge of playing a game with a machine had to take the place of advanced features like graphics or sound. Computer time and memory space were far too expensive to fill up with such frills, so mainframe games were (and are) usually text-only.

Home computers changed all that. Techno-freaks being what they are, it didn't take long before people started demanding arcade-style graphics on home computers, so special chips were added and large amounts of memory were set aside just for graphics. Sound also got attention. At first outboard devices were required to create an audible output, but soon ways were found to incorporate sound capability into computers. The Apple II and IBM PC both use one of the earliest and simplest forms of onboard sound: a speaker driven by a series of on/off pulses sent by writing to a particular memory location. Programmers have created some amazingly complex sounds, including speech, using this primitive hardware.

As home computers progressed, both the graphics and sound capabilities got better and better. There has been a consistent push for greater realism in game play.

It talks

So it won't surprise you that more and more computer games are including the sound of human (and non-human) voices. Pick up a copy of *Kennedy Approach, Impossible Mission, Beach-Head II, Jump Jet* or *Ghostbusters* and you'll see what I mean. Not only is speech synthesis being used very widely, but the quality is amazingly clear and improving all the time.

Good speech synthesis is very difficult; it didn't surprise me that most software houses have someone else do it for them. It did surprise me, however, to find out that all of the above-mentioned games except for *Jump Jet* had their speech provided by one company: Electronic Speech Systems of Berkeley, California. Since I only live a few miles away, it seemed like a good idea to run up there and see if I could find out the secret of their success.

ESS started in 1970 when Todd Mozer's father, Dr. Forrest Mozer, a space physicist at the University of California at Berkeley, developed a technique for speech synthesis based on playing back a digitized voice.

It had been assumed previously that this approach would use a prohibitive amount of memory, but Dr. Mozer found ways to encode the data and reduce its size as much as one hundred-fold. Other approaches rely on creating an elaborate mathematical model of the human voice, requiring either a special dedicated speech chip or a very fast, powerful (and expensive) central processor, and producing a rather mechanical sounding voice.

Dr. Mozer's algorithm keeps the natural



inflections of the human voice, and in current implementations, can use any microprocessor.

At first Dr. Mozer concentrated on hardware implementations of his ideas. His technology was used in the first talking calculator for the blind and in a speech chip produced by National Semiconductor. As the limitations of this approach became clear, he and his associates began to concentrate on ways to synthesize speech in software with little or no added hardware, which led to the techniques used to reproduce the incredible laugh in *Ghostbusters*.

Currently ESS, in addition to providing blood-curdling sounds for computer games, is producing speech synthesis products for major electronic equipment manufacturers.

They've just finished a product for AT&T that will ring you up in case of a fire or burglary at your house when you are away and tell you what the problem is; they are working with a major automobile manufacturer on a system that will tell you if your oil is low, and will tell you or your mechanic what the problem is when you break down. Wow!

How it's done

The ESS system is protected by a dozen or so patents so the details remain secret, but basically it goes like this. They start out by making a high quality recording of the words they want to use, with a voice they feel is appropriate. (For example, for an educational program based on Kipling's *The Jungle Book* they used an Indian student of Dr. Mozer's.) They then digitize the sound (convert it from analog tape-type sound to "1"s and "0"s that the computer can read) and, using a mini-computer, crunch the original down to 100th of its original size. This crunching is the heart of their system. It takes a considerable amount of effort to decide what information can be thrown away, and which information is essential to the sound. The original information usually involves about 10,000 complete sound samples per second; the finished product uses between 90 and 625 bytes per second.

On the Commodore 64, they normally use a rate of 375 bytes per second or less, so it's possible to pack quite a lot of speech into a program.

To play back the speech on the Commodore 64, ESS uses the machine's own sound device, the SID chip, but in quite an unusual way. All of the registers of SID are shut down except the volume control, which is varied up and down to recreate the original waveform.



Since there are only 16 possible settings, the resulting sound can never be as good as an ordinary tape deck, which has the capability of infinite variation, but they do produce easily intelligible speech.

ESS's technology can reproduce the accents and inflections of the original speaker quite accurately, like the Indian in *Jungle Book*, or can change them as needed so that the same vocabulary can produce a human and a robot voice.

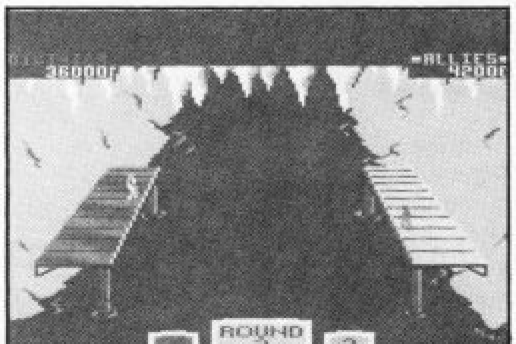
Kennedy Approach

All of this technology is pretty impressive, but it's up to the software companies to put it to use. I asked George Geary of MicroProse Software, publisher of *Kennedy Approach*, an air traffic control simulation, why MicroProse had decided to use speech synthesis in their program, and his answer was simple and to the point: "To enhance game play." The voice from the airport control tower (you) alternates with the voices from the various airplanes in giving and receiving instructions and really does add a considerable amount of realism to the simulation. Listen carefully, and you will notice that the voices of the different pilots are pitched differently — a subtle touch, but I found that even before I was aware that the voices were different, my ear knew the difference.

MicroProse, which has its speech digitizing done by ESS, is so happy with the effect of speech in *Kennedy Approach* that it is currently adding a male and a female voice to *Solo Flight* so that they can re-release an enhanced version. They do plan to limit their use of speech synthesis to programs where the game play itself will be enhanced by the electronic voice.

Other uses of synthesized speech are more whimsical. No one would argue that speech is a necessary part of *Ghostbusters*, but it certainly adds a distinctive and humorous touch. According to Brad Fregger, Director of Software Development at Activision, they wanted to "give the game the same feeling as the movie", and voice was one way of accomplishing this.

Activision considers voice to be "The icing on the cake — we wouldn't leave out the eggs in order to have the icing", but in



this case there was room for both. Personally, I'm glad — what other game says, "He slimed me", when I miss?

Likewise, the voices in *Jump Jet* and *Impossible Mission*, while adding to the enjoyment and character of the software, are not essential to the game.

Robert Botch, Epyx's Vice President of Marketing, said speech was put into *Impossible Mission* "to add something extra — some realism"; the cry that occurs as your character falls through one of the holes in the floor is certainly realistic enough.

A more serious use of speech synthesis is in educational programs. According to Todd Mozer, this is the area where ESS expects to see the greatest use of electronic voices in the future. He said, "There have been a lot of studies done about the effectiveness of speech in learning and the results have been extremely positive. Children will sit in front of a computer longer if it's giving them verbal feedback, and it provides a much more effective mechanism for teaching. I would expect that to be a realm where speech takes off." ESS has already produced speech for several educational programs including *Talking Teacher* by Imagic and *Cave of the Word Wizards* by Timeworks.

The future

What's the next step in the never-ending battle for greater realism and higher sales? The experts were nearly unanimous: before too long computers will be able to understand and respond to your speech. Speech recognition is extremely difficult to accomplish because of the complexities of the English language and the variations between voices, but several systems have been developed, including the Covox Voicemaster system for the Commodore 64. Mozer thinks that eventually computer manufacturers may include speech recognition capabilities as a part of the computer. It sounds like fun to me: I can think of quite a few things to say to that ghost that slimed me in *Ghostbusters*.

With built-in speech synthesis and speech recognition, you and your Commodore can sit down for a heart-to-heart chat or, more realistically, you will be able to use your home computer, with a modem, as an intelligent telephone answering machine. Not surprisingly, ESS is just putting the finishing touches to a system which does exactly that.

If there is any doubt about whether synthesized speech is here to stay or not, check into the specifications for Commodore's new wonder machine, the Amiga. Speech synthesis is built-in to the Amiga, and software companies are rushing to put it to use. So get used to hearing your computer talk back. □

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Build Your Own Adventure

Part One

by John Ransley

Playing adventures can be both a frustrating and rewarding business. Writing them is an art, but Into the Valley columnist John Ransley is set to show you that it's an art that can be learnt. This month he begins a two part, step-by-step guide to writing your own adventure, whether it's the Vic, 64 or 16.

Creating adventures is a fascinating pastime — and it's easy to do once you realise that it's just a matter of assembling a few simple standard programming modules and then sprinkling the result with a little of your own imagination.

In this two-part guide I'm jettisoning paragraphs of theory in favour of an almost line-by-line explanation of the sample program I'm using to help you learn the basics. This way, you'll be able to test each chunk as you go along, to understand better just how it works. You'll soon build up a useful knowledge of key adventures of your own.

Map it out

But first, the map. In just the same way as you should usually make a map whilst playing an adventure, so too is a map is the key to devising one of your own. This will always take the form of a grid within which you can plot the various locations and hazards to be encountered. The sample game challenges the player to track down *The Phantom of Priory Court* — a mischievous poltergeist, maybe, that's been causing havoc at the offices of *Commodore User*. As you'll see from **Fig. 1**, I've created 25 locations on a 5 × 5 square grid. Each box is numbered (this is important) from 1 to 25, and it's this identification which forms the basis of the classic N,S,E,W movement logic.

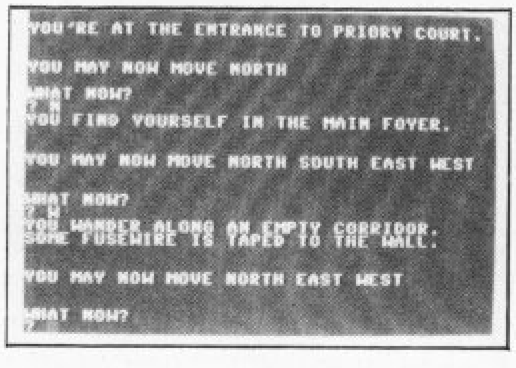
The next task (and this is where you'll start feeling a bit god-like) is to decide where you'll allow the player to move, simply shown by arrowheads on your master map. For example, fig. 1 illustrates that it's possible to move into the lift (location 14) only from location 19, and impossible to move out again, whereas movement between locations 2,3,7, and 8 is fairly unrestricted.

Type it in

Now it's time to give your fingers some work, by entering **Part 1** of the listing. When you've done so, check through it carefully — especially the line following each description (starting at 3060) which dictates the legal moves from that location. Thus you'll see that from Mike's Madhouse at location 3, line 3100 permits no movement either north (which would take you off the top of the map) or east into the Ad Department, but does allow a move south into location 8 and west into location 2.

Checking back on earlier lines, 1340 determines the starting point at the beginning of every game; experiment by changing this to any number you like between 1 and 25, but don't forget to correct it back to 23 before entering **Part Two** of the listing.

Lines 1400, 1440-1480, 1670-1710, 1750, 1860, 1930-1960 and 2000 all work together to generate the player's description, declare legal moves, and update the current position. You could cram more GOTOS into each line, but



restricting it to five makes it easier to figure out the logic row by row. For instance, if the current position was 21 — the post room — control would pass to line 1480, which would produce a value of 1 (CP-20) — and thus route to line 3480.

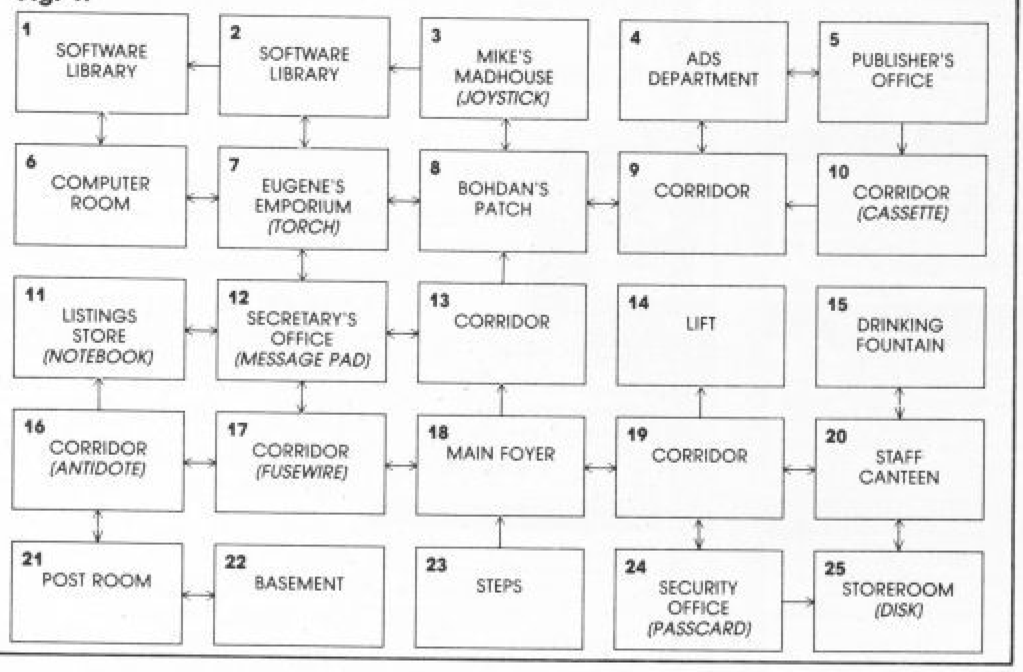
Having printed the correct description, and with a new set of values for N,S,E and W, control would eventually flip back, via temporary line 1530, to the legal moves display beginning at 1670. Satisfy yourself that all this works properly by moving all round the grid, entering and leaving each location by all possible entry and exit points — and attempting illegal moves too, in order to make certain that line 2000 is operating correctly.

I've deliberately kept the descriptions short so that Phantom will run on the Vic 20 with 16K expansion as well as on the C16, Plus/4 and 64/128. However, the appeal of a text adventure is (or should be) in the fullness and richness of its prose, so feel free to compose more ambitious descriptions for your own efforts — certainly the Plus/4 and 64/128 will have plenty of room left for them.

Before entering the next few modules, save a copy of Part 1, but *please* make these additions before doing so:

1510 REM*PRINT OBJECT NAME IN RIGHT LOCATION*****
1530 FOR X = 1 TO 9

Fig. 1.





1540 IF PL%(X) = CP THEN PRINT LD$(X)
1550 NEXT X
Finally, make this alteration:
1890 GOTO 2100

The next step

As in all good adventures, *Phantom* presents the player with a number of objects which he can Get or Take, Drop or Leave. **Part Two** of the listing incorporates the modules for handling that aspect as well as the routine for checking the inventory.

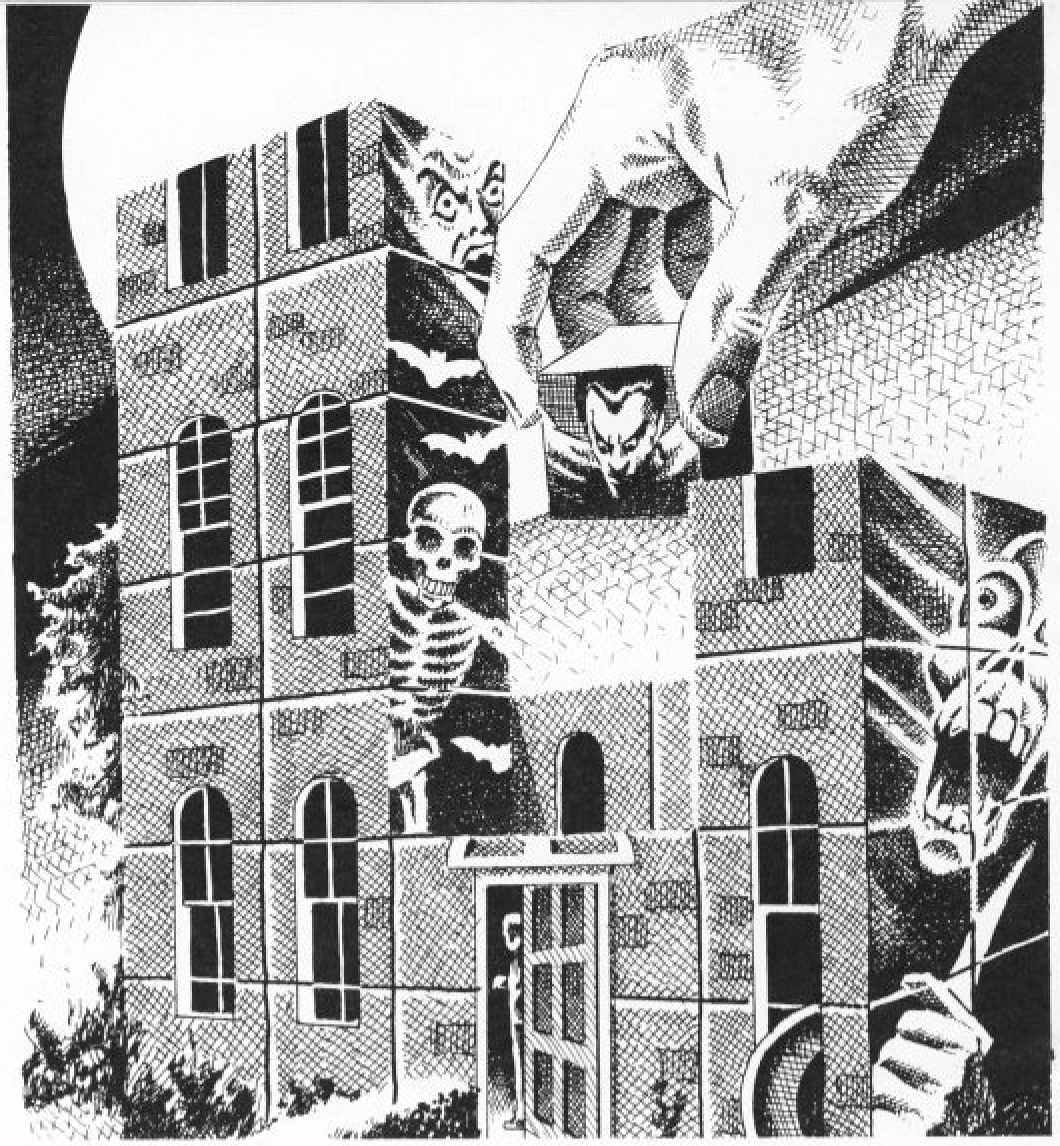
Lines 1090-1140 feed the three arrays which initially seed each of the nine objects at the correct player location (PL%) and create the short and long description — SD$ and LD$ — of each object for the inventory and ordinary screen printout respectively. For example, once the loop is completed, PL%(4) will hold the value 11, indicating that at that location the player will be informed that a notebook lies open on a shelf. Lines 1530-1550 see to it that the message will be repeated each time he revisits the same location, provided that the notebook hasn't already been added to the player's inventory.

Lines 2240-2440 present a very simple version of the parser that is at the heart of every adventure program. Supposing that you've entered a classic verb/noun input such as GET NOTEBOOK, line 2250 will first check that the string does contain two words separated by a space; if so control passes to 2310, which splits the total input string into a verb string (GET) to the left of the space and a the noun string (NOTEBOOK) to the right of it.

In this case, line 2390 passes control to 2650-2700, which check that you don't already have that object, and that it is indeed to be found at your current location, before adding it to your

Part One

```
1000 REM***THE PHANTOM OF PRIORY COURT***
1010 :
1020 REM***WRITTEN FOR COMMODORE USER***
1030 :
1040 REM***COPYRIGHT 1985 JOHN RANSLEY***
1050 :
1320 REM***SET CURRENT POSITION/CLEAR SCREEN***
1330 :
1340 CP=23
1350 PRINT CHR$(147)
1360 GOTO 1440
1370 :
1380 REM***SET NEW POSITION***
1390 :
1400 CP=NP
1410 :
1420 REM***SIGNPOST TO LOCATION***
1430 :
1440 IF CP<6 THEN ON CP GOTO 3050,3070,3090,3110,3130
1450 IF CP<11 THEN ON CP-5 GOTO 3150,3170,3190,3210,3230
1460 IF CP<16 THEN ON CP-10 GOTO 3250,3270,3300,3320,3350
1470 IF CP<21 THEN ON CP-15 GOTO 3380,3400,3420,3440,3460
1480 IF CP<26 THEN ON CP-20 GOTO 3480,3510,3530,3550,3570
1490 :
1530 GOTO 1660:REM TEMPORARY LINE
1540 :
1550 :
1560 :
1640 REM***DISPLAY POSSIBLE MOVES***
1650 :
1660 PRINT CHR$(13)
1670 PRINT "YOU MAY NOW MOVE ";
1680 IF N>0 THEN PRINT "NORTH ";
1690 IF S>0 THEN PRINT "SOUTH ";
1700 IF E>0 THEN PRINT "EAST ";
1710 IF W>0 THEN PRINT "WEST"
1720 REM***INVITE NEW INSTRUCTION***
1730 :
1740 PRINT CHR$(13)
1750 PRINT"WHAT NOW?":INPUT I$
1760 :
1840 REM***CHECK KEY ENTERED***
1850 :
1860 IF I$="N" OR I$="S" OR I$="E" OR I$="W" THEN 1930
1870 :
1880 REM***JUMP TO OTHER I$ OPTIONS***
1890 GOTO 1750:REM TEMPORARY LINE
1900 :
1910 REM***CHANGE POSITION VALUE***
1920 :
1930 IF I$="N" AND N>0 THEN NP=CP-5:GOTO 1400
1940 IF I$="S" AND S>0 THEN NP=CP+5:GOTO 1400
1950 IF I$="E" AND E>0 THEN NP=CP+1:GOTO 1400
1960 IF I$="W" AND W>0 THEN NP=CP-1:GOTO 1400
1970 :
1980 REM***BLOCK ILLEGAL MOVE IF N,S,E OR W=0***
1990 :
2000 PRINT "YOU CAN'T GO THAT WAY.":PRINT CHR$(13):GOTO 1670
2010 :
3020 :
3030 REM***LOCATION DESCRIPTIONS AND EXIT DATA***
3040 :
3050 PRINT"YOU ARE IN THE SOFTWARE LIBRARY."
3060 N=0:S=6:E=2:W=0:GOTO 1530
3070 PRINT"YOU ARE IN THE SOFTWARE LIBRARY."
3080 N=0:S=7:E=0:W=1:GOTO 1530
3090 PRINT"YOU MATERIALISE IN MIKE'S MADHOUSE."
3100 N=0:S=8:E=0:W=2:GOTO 1530
3110 PRINT"YOU'RE SPACED OUT IN THE ADS DEPARTMENT."
3120 N=0:S=9:E=5:W=3:GOTO 1530
3130 PRINT"YOU ENTER THE PUBLISHER'S OFFICE."
3140 N=0:S=10:E=0:W=4:GOTO 1530
3150 PRINT"YOU ENTER THE DESERTED COMPUTER ROOM."
3160 N=1:S=0:E=7:W=0:GOTO 1530
3170 PRINT"YOU STUMBLE UPON EUGENE'S EMPORIUM."
3180 N=2:S=12:E=8:W=6:GOTO 1530
3190 PRINT"YOU STRAY ONTO BOHDAN'S PATCH."
3200 N=3:S=0:E=9:W=7:GOTO 1530
3210 PRINT"YOU WANDER ALONG AN EMPTY CORRIDOR."
3220 N=4:S=0:E=0:W=8:GOTO 1530
3230 PRINT"YOU WANDER ALONG AN EMPTY CORRIDOR."
3240 N=5:S=0:E=0:W=9:GOTO 1530
3250 PRINT"OLD PROGRAM LISTINGS ARE STORED HERE."
3260 N=0:S=0:E=12:W=0:GOTO 1530
3270 PRINT"YOU ENTER THE SECRETARY'S OFFICE."
3280 PRINT "SHE IS OUT TO LUNCH."
3290 N=7:S=17:E=13:W=11:GOTO 1530
3300 PRINT "YOU ARE IN A DESERTED CORRIDOR."
```



inventory. The opposite effect is triggered by lines 2400 and 2750-2800 respectively. Touching the "I" key and Return brings into play lines 2480-2530 which check out every element of the PL% array for a −1 value to establish whether or not you're carrying one or more of the nine moveable objects. The matching short description of each object that you do have will then be printed to the screen.

Having entered all the program lines in **Part Two** of the listing, you can have fun exploring the 25 locations again, this time checking that all nine objects are initially to be found at their proper places, as indicated on the map. Test the proper working of the other modules by taking or getting objects, moving to different locations and then dropping them there. Objects should not of course reappear when you revisit their locations — even if they're not in your inventory — but should still be where you subsequently left or dropped them. You can also verify the inventory module, making sure that it updates each time you collect or discard any object.

Next month's issue will list the remaining parts of the program with additional explanations as to how each module works. You'd better start work on saving the staff of Commodore from the poltergeist or you'll never get the second part. See you next month for the thrilling conclusion.

Part One (continued)

```
3310 N=0:S=0:E=0:W=12:GOTO 1530
3320 PRINT"YOU ENTER THE LIFT AND THE DOORS."
3330 PRINT"CLOSE FIRMLY BEHIND YOU."
3340 N=0:S=0:E=0:W=0:GOTO 1530
3350 PRINT"YOU PAUSE AT A DRINKING FOUNTAIN"
3360 PRINT"IN THE CORRIDOR."
3370 N=0:S=20:E=0:W=0:GOTO 1530
3380 PRINT"YOU WANDER ALONG AN EMPTY CORRIDOR."
3390 N=11:S=21:E=17:W=0:GOTO 1530
3400 PRINT"YOU WANDER ALONG AN EMPTY CORRIDOR."
3410 N=12:S=0:E=18:W=11:GOTO 1530
3420 PRINT"YOU FIND YOURSELF IN THE MAIN FOYER."
3430 N=13:S=23:E=19:W=17:GOTO 1530
3440 PRINT"YOU WANDER ALONG AN EMPTY CORRIDOR."
3450 N=14:S=24:E=20:W=18:GOTO 1530
3460 PRINT"YOU ENTER THE STAFF CANTEEN."
3470 N=15:S=25:E=0:W=19:GOTO 1530
3480 PRINT"HERE IN THE POST ROOM, SACKS OF VALLEY"
3490 PRINT"COMPETITION ENTRIES ARE BEING SORTED."
3500 N=16:S=0:E=22:W=0:GOTO 1530
3510 PRINT"STEPS TAKE YOU DOWN TO THE BASEMENT."
3520 N=0:S=0:E=0:W=21:GOTO 1530
3530 PRINT"YOU'RE AT THE ENTRANCE TO PRIORY COURT."
3540 N=18:S=0:E=0:W=0:GOTO 1530
3550 PRINT"YOU DISCOVER THE SECURITY OFFICE."
3560 N=19:S=0:E=25:W=0:GOTO 1530
3570 PRINT"YOU STUMBLE ON A DUSTY OLD STOREROOM."
3580 N=20:S=0:E=0:W=0:GOTO 1530
3590 :
```

Part Two

```
1060 REM***SET UP OBJECT ARRAYS***
1070 :
1080 :
1090 DIM PL%(9),SD$(9),LD$(9)
1100 :
1110 REM***FILL OBJECT ARRAYS***
1120 :
1130 FOR X=1TO9:READ PL%(X),SD$(X),LD$(X)
1140 NEXT X
1150 :
1160 REM***DATA FOR OBJECT ARRAYS***
1170 :
1180 DATA 3,JOYSTICK,YOU SPOT A BROKEN JOYSTICK HERE.
1190 DATA 7,TORCH,A TORCH HAS BEEN LEFT ON THE DESK.
1200 DATA 10,CASSETTE,A CASSETTE IS HALF HIDDEN BY THE CARPET.
1210 DATA 11,NOTEBOOK,A NOTEBOOK LIES OPEN ON A SHELF.
1220 DATA 12,PAD,YOU NOTICE A MESSAGE PAD BY THE PHONE.
1230 DATA 16,ANTIDOTE,YOU FIND A PHIAL OF ANTIDOTE HERE.
1240 DATA 17,FUSEWIRE,SOME FUSEWIRE IS TAPED TO THE WALL.
1250 DATA 24,PASSCARD,A PLASTIC PASSCARD IS ON THE DESK.
1260 DATA 25,DISK,YOU NOTICE A DISK LYING ON THE FLOOR.
1270 :
1510 REM***PRINT OBJECT NAME IN RIGHT LOCATION***
1520 :
1530 FOR X=1 TO 9
1540 IF PL%(X)=CP THEN PRINT LD$(X)
1550 NEXT
1560 :
2070 :
2080 REM***CHECK OTHER SINGLE LETTER INPUTS***
2090 :
2100 IF I$="I" THEN 2480
2210 :
2220 REM***SCAN TWO-WORD COMMAND***
2230 :
2240 FOR W=1 TO LEN(I$)
2250 IF MID$(I$,W,1) = " " THEN 2310
2260 NEXT W
2270 PRINT"YOU MUST USE TWO WORDS":GOTO 1740
2280 :
2290 REM***SPLIT VERB AND NOUN***
2300 :
2310 FOR SP=1 TO LEN(I$)
2320 IF MID$(I$,SP,1) = " " THEN 2340
2330 NEXT SP
2340 VE$ = LEFT$(I$,SP-1)
2350 NO$ = RIGHT$(I$,(LEN(I$)-SP))
2360 :
2370 REM***SCAN VE$ FOR RECOGNISED COMMANDS***
2380 :
2390 IF VE$="GET" OR VE$="TAKE" THEN 2650
2400 IF VE$="DROP" OR VE$="LEAVE" THEN 2750
2410 :
2420 REM***IF VERB NOT RECOGNISED***
2430 :
2440 PRINT"SORRY, YOU CAN'T ";I$:GOTO 1740
2450 :
2460 REM***MAKING THE INVENTORY***
2470 :
2480 PRINT"YOUR INVENTORY COMPRISES -"
2490 IN=0:FOR L=1 TO 9
2500 IF PL%(L) = -1 THEN PRINT SD$(L):IN=IN+1
2510 NEXT
2520 IF IN=0 THEN PRINT "NOTHING"
2530 GOTO 1660
2540 :
2630 REM***GETTING OBJECTS***
2640 :
2650 FOR G=1 TO 9
2660 IF SD$(G)=NO$ THEN 2680
2670 NEXT
2680 IF PL%(G)=-1 THEN PRINT"YOU HAVE "SD$(G)" ALREADY.":GOTO 1660
2690 IF PL%(G)<>CP THEN PRINT SD$(G)" NOT HERE.":GOTO 1660
2700 PRINT"YOU'VE TAKEN ";SD$(G):PL%(G)=-1
2710 GOTO 1660
2720 :
2730 REM***DROPPING OBJECTS***
2740 :
2750 FOR L=1 TO 9
2760 IF SD$(L)=NO$ THEN 2780
2770 NEXT
2780 IF PL%(L) <> -1 THEN PRINT "YOU DON'T HAVE "SD$(L):GOTO 1660
2790 PRINT"YOU HAVE DROPPED ";SD$(L):PL%(L)=CP
2800 GOTO 1660
2810 :
```

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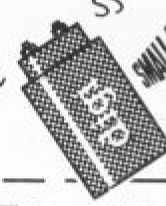
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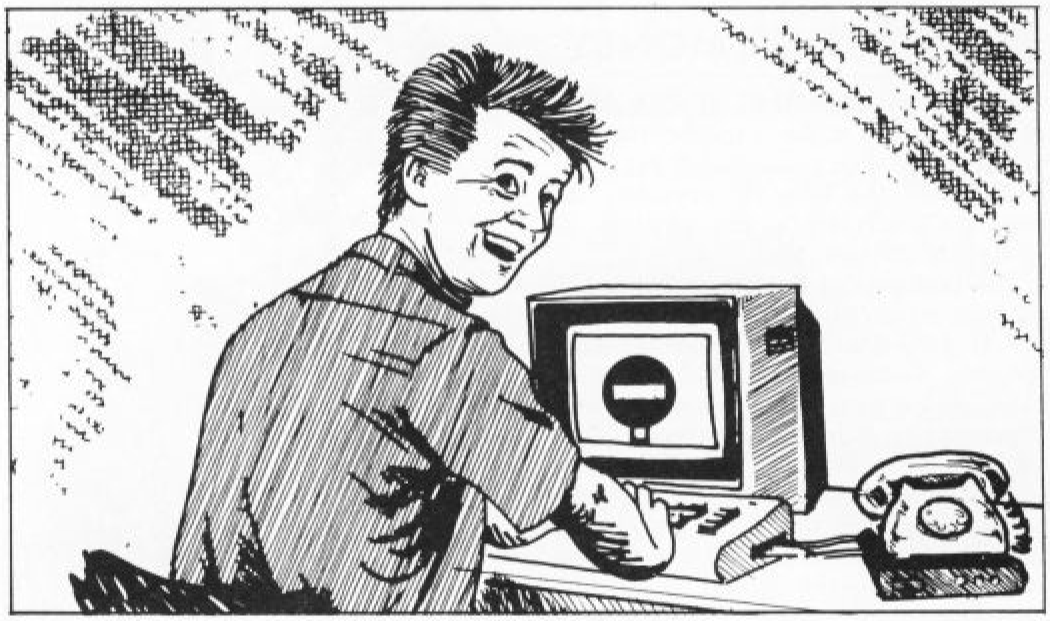


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Wallowing in MUD

by Robert Schifreen

Multi-user Dungeons, the adventure game for modem lovers, is now available to Commodore 64 owners, even if they don't have a Compunet subscription. But what exactly is it?



MUD, as you probably know by now, is an adventure which runs on a mainframe computer. Despite being a pretty challenging adventure, the real fun starts when you appreciate that you're not alone. Up to 32 people can play the same game at the same time. So, if you type LOOK and the computer says that there's a piece of treasure on the ground, the player who types TAKE ALL first gets it.

The key to MUD is the hacker's best friend, the modem. You dial the computer, log in, enter the name you want to call yourself (I'm known as *Hex Maniac*) and you find yourself in the game.

MUD was written and conceived by two students at Essex University as part of an artificial intelligence (AI) course. Free access to the game was offered by Essex to



any micro fan with a modem and a PSS account, in order to connect to the DEC-10 minicomputer at the university. Because the campus's computer system was intended for more useful activity, playing MUD was restricted to between the hours of midnight and 7am which, as any real microholic will tell you, is when he's most awake.

After a couple of years at Essex (it's still there, by the way), various companies looked at the idea and decided that it was worth launching as a commercial venture. Compunet's main selling point at the time of its launch was that it had MUD, and now British Telecom itself is involved.

BT has formed a company with the game's authors and commissioned MUD 2, which has 1000 locations, twice as many as the original which Compunet and Essex are still running. By the time you read this, MUD 2 will be online.

There are regular rumours that Prestel is about to launch MUD, though this is just as regularly denied by Prestel themselves. At the moment, the Prestel system just isn't suited to such a game.

CRACKING THE MUD

The ultimate aim in MUD is to find as many of the hundreds of pieces of treasure as you can, and drop them in the swamp. This leads to points, which leads to a higher skill level.

You start off as a novice with 0 points and, hopefully, progress through ten skill levels to ultimately become a Wizard with 102400 points. Once you make Wizard status you become immortal and have a much larger set of commands and spells available.

Full interaction between players is possible. To find out who's playing in your game, just type WHO. Then, to speak to someone, you type their name followed by a message. The message instantly appears on the selected person's terminal. Of course, you don't always have to be friendly. If you manage to kill someone you inherit two thirds of their points, which may be just what you need to bring you to the next skill level.

MUD ON COMPUNET

Compunet MUD has been quite heavily used over the past few months. The system's members (all of whom own Commodore 64s) clock up around 850 hours of MUD each month, which is around 2200 games. The average player logs on for half an hour a time, though the record session is around six hours. I was surprised to learn that the average Compunet member will actually play almost once every day, with Thursdays, Fridays and Saturdays being the heaviest times — that's dedication for you.

Last month, in competition to the BT version, Compunet announced that any micro member could play MUD on Compunet, regardless of what micro or modem was being used. The rest of the system is still open only to Commodore 64 users, though a special telephone number allows anyone to access the MUD area. Incidentally, if you have a Commodore 128 or Plus 4, then these micros are also fully compatible with the Compunet modem.

Although Compunet are still running the original version of the game, it has one big advantage over the BT system, and that's telephone charges. Compunet has local call access for around 95% of Britain. For the time being at least, BT MUD will operate on one London number only, which is fairly expensive unless you live in the capital. The *Multistream* network, which allows local call access to Prestel, may be used in the future for MUD but there are no plans to do this at the moment.

HOW TO APPLY

To apply for BT MUD, you call the MUD-line on 01-608 1173 and order yourself a MUD pack. It's available through mail order only and costs £20. You'll need a modem operating at 300 baud or 1200/75 baud. The Compunet modem will do nicely.

The pack contains a map, a security card (we don't want any hackers on now, do we?), a set of instructions and 30 credits. A credit lasts you six minutes and costs 20p. A further pack of 50 is available mail-order and bulk discounts are available. The system is open between 6pm and 8am during the week, and all day at weekends. It can actually support 100 people playing the same game, compared to Essex and Compunet's 32. BT plan a Wizard's Party for the first few players to reach the top level of the game.

As part of a special offer, anyone ordering a MUD pack before November 5th can have unlimited free games on MUD until November 5th. This gives you plenty of time to practise, and become familiar with the system and the locations. On November 5th, the game will be reset and everyone starts again at novice level.

COUNT YOUR MONEY

Compunet MUD has three different levels of pricing. You make a regular monthly payment and then pay so much per hour. The higher the monthly payment, the lower the hourly rates so you can decide on an amount that suits you.

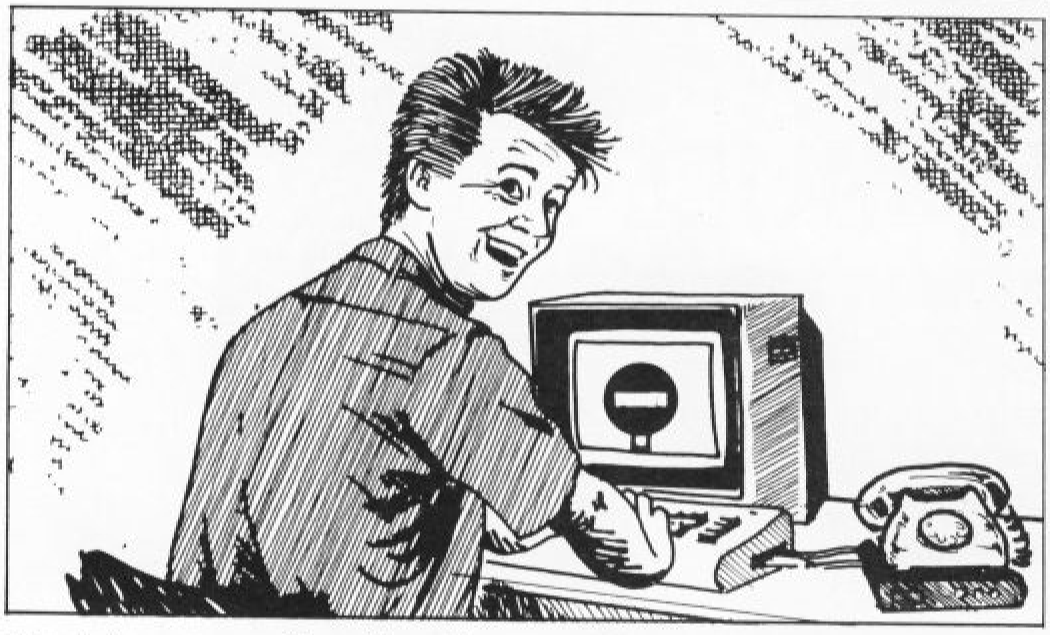
The best rate for the heavy user is £25 per month plus £1.85 per hour. Details on 01-637 1355 (you'll need a 1200/75 baud modem). Compunet MUD is currently open 24 hours a day, but this may change depending on what the users want. With the game open all day, it's possible to log in and find that you're the only person playing. However, this has its good points as, with no one around to kill you, you can whizz through the game picking up treasures.

A hint book is available to Wizards, but no one else. If you do get stuck, though, there should always be a friendly person around who can help.

Essex MUD is currently open between 2am and 8am weekdays, and 10pm to 7am at weekends. You will need a PSS account to contact the Essex computer (details from your local BT area office). The PSS address is A220641141. Once you're in, type LOGIN 2653,2653. The password changes occasionally, so type HELP MUD before you LOGIN and you should find out what it is.

As well as MUD, there are a number of other similar systems at Essex. Try typing VALLEY or ROCK. If you're bored with the official games, try some of the unofficial versions, like CRUD or BLUD. The latter is set completely in a world made from congealed blood!

Incidentally, PLEASE don't bother the staff at Essex University if you have any MUD queries. They have a university to run. □



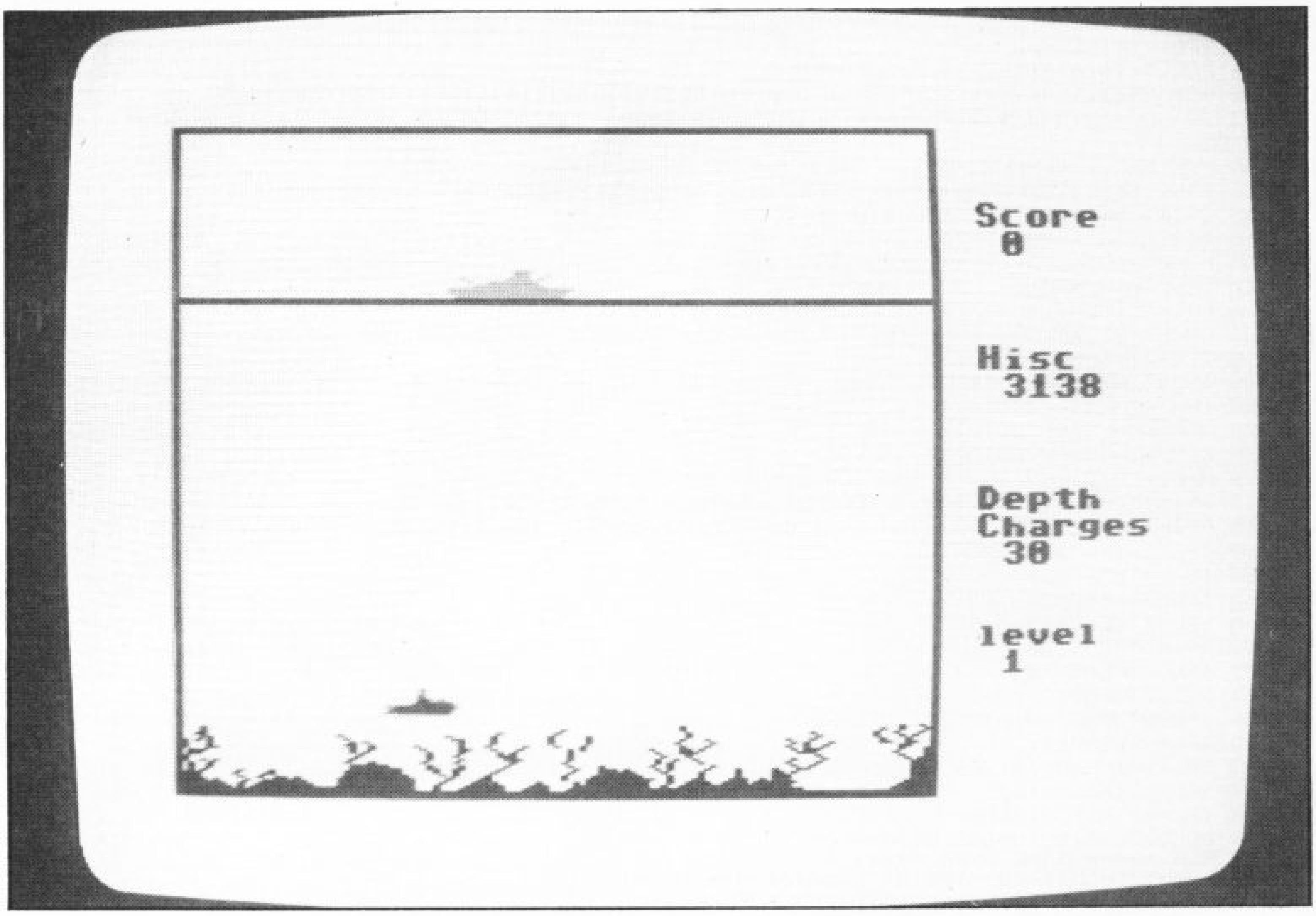
WARNING

Before you become hooked on MUD, ask yourself whether you can afford it. Remember that you'll have to pay telephone charges in addition to the £2-odd per hour that it costs to play. If you know someone with a MUD account, ask them what it's like and how much they spend per quarter.

Even playing through PSS at Essex is not cheap and many addicts have been surprised to receive four-figure phone bills.

You could always consider sharing an account with a friend, but make sure that you keep a careful note of who used the system and when, as disputes could be costly.





Sub Attack for the C64

by Sandy Munro

We've been all at sea this month playing Sandy Munro's Sub Attack. The idea is to blow the attacking subs out of the water with your depth charges. The subs travel at different depths and vary in speed so accurate judgement is crucial.

Points are scored for each scuppered submarine, but let any through and you will be heavily penalised. Successful commanders get to go on another more difficult sortie and the very best can enter their names on the high score role of honour. By the way, you won't get out of dock without a joystick in port 2.

```
10 POKE53269,0:POKE53280,1:POKE53281,1:PRINT"[CLS][BLK]":CLR:RESTORE:GOSUB9000
25 GOSUB900
30 GOSUB1000
35 GOSUB2000:GOSUB605
90 GOSUB515:GOSUB505:FORX=0TO110STEP.5:POKEV+12,X:NEXTX
105 IFF=0ANDG<2THEN705
110 IFPEEK(56320)=119THENX=X+H
115 IFPEEK(56320)=123THENX=X-H
120 IFF=0ANDPEEK(56320)<112THENE=1
125 IFE=1THENE=0:F=1:GOSUB305
130 IFX<28THENX=28
135 IFX>220THENX=220
140 POKEV+12,X
145 A=A+C:IFA>242THENM=M+1:SC=SC-(L+B):GOSUB605
150 POKEV+10,A
155 IFF=0THEN105
160 D=D+(H+1):IFD>215THENF=0:POKEV+21,127:GOTO105
165 POKEV+15,D
170 IFPEEK(V+30)=160THEN405
200 GOTU105
305 GOSUB515:D=105:POKEV+15,D:POKEV+14,X:POKEV+21,255:G=G-2
310 PRINT"[HOM][15CD]"TAB(32)G"[CL][2SPC]":Z=PEEK(V+30):RETURN
405 POKEV+21,127
410 A=A+C:B=B+4
```

```
415 IFA>242THENA=25
420 IFB>230THEN430
425 POKEV+10,A:POKEV+11,B:GOTO405
430 GOSUB505:POKEV+21,95:FORJ=1TO30:POKE53281,RND(1)*15:NEXTJ:POKE53281,1
435 SC=SC+(10*C+B-99):F=0:D=0:PRINT"[HOM][4CD]"TAB(32)SC"[CL][2SPC]":GOSUB605:GO
TO105
505 POKES+4,128:POKES+5,13:POKES+1,3:POKES,20:POKES+4,129:RETURN
515 POKES+11,128:POKES+12,12:POKES+8,126:POKES+7,151:POKES+11,129:RETURN
605 C=INT(RND(1)*4)+L:IFC=0THEN605
610 A=0:B=INT(RND(1)*70)+140:F=0:E=0
615 POKEV+10,A:POKEV+11,B:POKEV+21,127
620 IFSC<0THENSC=0
625 PRINT"[HOM][4CD]"TAB(32)SC"[CL][2SPC]":RETURN
705 POKEV+21,31:ONL GOTO710,710,715,720,720,725,725,725,730,730
710 IFM>2THEN800:GOTO730
715 IFM>3THEN800:GOTO730
720 IFM>4THEN800:GOTO730
725 IFM>5THEN800:GOTO730
730 IFM>6THEN800:GOTO730
735 M=0
740 PRINT"[HOM][5CD]"TAB(7)"[G>C]ONGRATULATIONS!"
745 PRINTTAB(2)"[CD][G>Y]OU HAVE COMPLETED LEVEL"L"[CL].":FORI=1TO4000:NEXT
750 L=L+1:IFL>12THENL=12
755 IFL=2THENG=26
760 IFL=3THENG=24
765 IFL=4THENG=22:H=4
770 IFL=5THENG=20
775 IFL=6THENG=18
780 IFL=7THENG=16:H=5
785 IFL=8THENG=14
790 IFL=9THENG=12
792 IFL=10THENG=10:H=6
794 IFL=11THENG=10
796 IFL=12THENG=10:H=7
799 GOSUB2000:GOSUB605:GOTO90
800 REM ***** GAME OVER *****
810 PRINT"[HOM][8CD]"TAB(8)"[G<A][12G>*][G<S]"
815 PRINTTAB(8)"[G>-][REV][12SPC][OFF][G>-]"
820 PRINTTAB(8)"[G>-][REV] [G>G]AME[2SPC][G>O]VER [OFF][G>-]"
825 PRINTTAB(8)"[G>-][REV][12SPC][OFF][G>-]"
```

HOW TO USE EASY ENTER

EASY ENTER

COLOUR CODES

[BLK] — press CTRL and 1
[WHT] — press CTRL and 2
[RED] — press CTRL and 3
[CYN] — press CTRL and 4
[PUR] — press CTRL and 5
[GRN] — press CTRL and 6
[BLU] — press CTRL and 7
[YEL] — press CTRL and 8

[ORG] — press CBM key and 1
[BRN] — press CBM key and 2
[L RED] — press CBM key and 3
[GR1] — press CBM key and 4
[GR2] — press CBM key and 5
[L GRN] — press CBM key and 6
[L BLU] — press CBM key and 7
[GR3] — press CBM key and 8

COMMODORE GRAPHIC CHARACTERS

PRINT WHITE
CURSOR DOWN
REVERSE FIELD ON
HOME
PRINT RED
CURSOR RIGHT
PRINT GREEN
PRINT BLUE
FUNCTION KEY F1
FUNCTION KEY F3
FUNCTION KEY F5
FUNCTION KEY F7

FUNCTION KEY F2
FUNCTION KEY F4
FUNCTION KEY F6
FUNCTION KEY F8
PRINT BLACK
CURSOR UP
REVERSE FIELD OFF
CLEAR
INSERT
PRINT PURPLE
CURSOR LEFT
PRINT YELLOW
PRINT CYAN

OTHER CODES

[CU] — press 'cursor up' key
[CD] — press 'cursor down' key
[CL] — press 'cursor left' key
[CR] — press 'cursor right' key
[HOM] — press HOME key
[CLS] — press CLEAR key
[DEF] — press INST key (insert)
[REV] — press RVS ON key (CTRL and 9)
[OFF] — press RVS OFF key (CTRL and 0)
[SPC] — press spacebar
[G<key] — press CBM key with specified key
[G>key] — press SHIFT key with specified key

EXAMPLES:

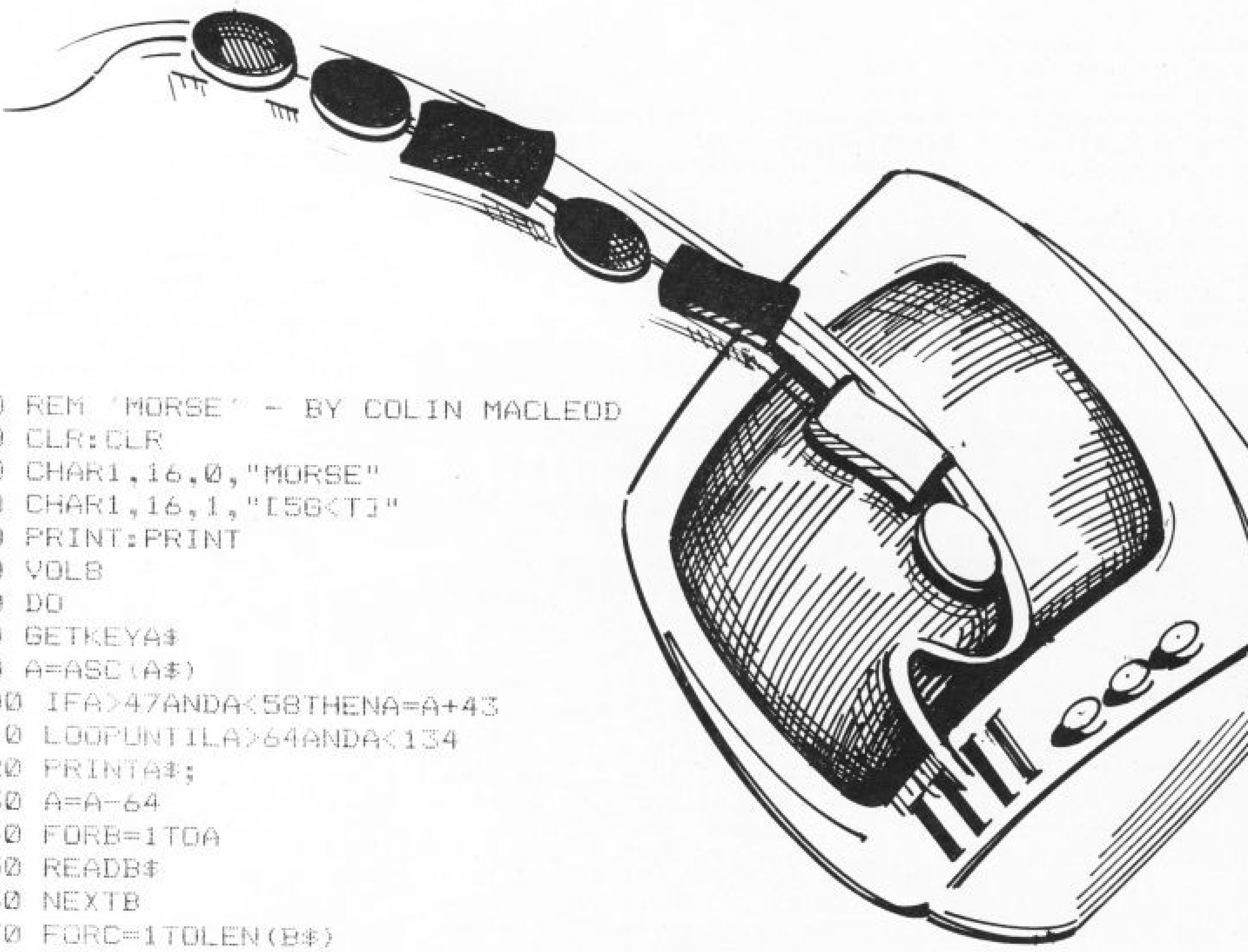
[3SPC] — press spacebar three times
[5CD] — press 'cursor down' key five times
[G>F] — press SHIFT key with 'F'

```
830 PRINTTAB(8)"[G<Z][12G>*][G<X]"
835 FORI=1TO3000:NEXT:POKEV+21,0
840 FORI=1TO10:IFSC>HI(I)THENGOTO842
841 NEXTI:GOSUB870:GOTO30
842 FORJ=10TO I STEP-1:HI$(J+1)=HI$(J):HI(J+1)=HI(J):L(J+1)=L(J):NEXTJ
843 PRINT"[CLS][5CD][G>C]ONGRATULATIONS,YOU HAVE A HIGH SCORE"
844 PRINT"[CD]AND ARE AMONGST THE TOP TEN HIGH SCORERS"
846 PRINT"[2CD][G>Y]OUR NAME [G>C]OMMANDER (UP TO 15 LETTERS)":PRINT"[2CD][2SPC]
[15G<U]"
848 POKE198,0:INPUT"[2CU]";HI$(I)
849 IFLEN(HI$(I))>15THEN842
860 HI(I)=SC:L(I)=L
862 GOSUB870
864 PRINT"[CD][5SPC][G>D]O YOU WANT ANOTHER GAME (Y/N)";
865 GETA$:IFA$=""THEN865
866 IFA$="Y"THENGOTO30
867 IFA$="N"THENEND
868 GOTO865
869 REM ***** HIGH SCORE TABLE *****
870 PRINT"[CLS]"TAB(11)"[REV] [G>H]IGH [G>S]CORE [G>T]ABLE [OFF]"
875 PRINT"[CD]"TAB(5)"[G>N]AME"TAB(20)"[G>S]CORE"TAB(30)"[G>L]EVEL"
880 FORI=1TO10:PRINT"[CD]"ITAB(4)HI$(I):PRINT"[CU]"TAB(20)HI(I):PRINT"[CU]"TAB(3
0)L(I)
885 NEXT
890 M=0:L=1:G=30:H=3:SC=0
895 FORI=1TO4000:NEXTI:RETURN
900 REM ***** VARIABLES *****
905 V=53248:S=54272:SC=0:G=30:M=0:L=1:H=3:DIMHI$(11),HI(11),L(11)
910 FORI=0TO24:POKES+I,0:NEXT:POKES+24,15
915 FORI=2TO10:HI(I)=1000-(90*I):HI$(I)="[G>A].[G>R].[G>M] [G>S]OFTWARE":L(I)=1:
NEXT
920 HI$(1)="[G>C]OMMANDER [G>M]UNRO":HI(1)=3138:L(1)=3:RETURN
1000 REM INSTRUCTIONS
1010 PRINT CHR$(14)
1170 RETURN
2000 REM ***** SET UP SCREEN *****
2005 PRINT"[CLS][BLK][G<A][29G>*][G<S]"
2010 FORI=1TO23:PRINT"[G>-][29SPC][G>-]":NEXT
2015 PRINT"[G<Z][29G>*][G<X]";
2020 PRINT"[HOM][6CD][G<Q][29G>*][G<W]"
2025 PRINT"[HOM][3CD]"TAB(32)"[G>S]CORE"
2030 PRINTTAB(32)SC
2035 PRINT"[3CD]"TAB(32)"[G>H]ISC"
2040 PRINTTAB(32)HI(1)
2045 PRINT"[3CD]"TAB(32)"[G>D]EPTH":PRINTTAB(32)"[G>C]HARGES":PRINTTAB(32)G
2050 PRINT"[2CD]"TAB(32)"LEVEL":PRINTTAB(32)L
2055 FORI=0TO4:POKEV+39+I,0:NEXT:POKEV+45,15:POKEV+29,223
2060 POKEV,27:POKEV+1,224:POKEV+2,75:POKEV+3,224:POKEV+4,123:POKEV+5,224
2065 POKEV+6,171:POKEV+7,224:POKEV+8,219:POKEV+9,224:POKEV+12,0:POKEV+13,88
2070 POKEV+21,127:RETURN
9000 REM ***** SPRITE DATA *****
9005 POKE2040,200:POKE2041,201:POKE2042,202:POKE2043,203:POKE2044,204
9010 POKE2045,205:POKE2046,206:POKE2047,207
9015 FORI=200TO207:FORJ=0TO62:READK:POKEI*64+J,K:NEXTJ,I:RETURN
9105 DATA0,0,8,0,0,8,0,0,24,0,0,12,0,0,84,0,0,68,0,0,70,0,0,56,0,0,48,0,0,64
9110 DATA0,0,74,0,0,36,0,0,36,0,0,168,33,0,240,67,0,240,36,208,250,19,248,255
9115 DATA39,252,255,175,255,255,255,255
9125 DATA0,0,0,0,0,0,0,0,32,0,16,16,0,12,10,0,4,25,2,4,9,1,6,10,0,132,4,0,136
9130 DATA8,0,132,17,1,8,15,192,132,15,240,204,31,240,72,31,248,40,63,252,16
9135 DATA63,252,33,63,252,67,255,252,71,255,255,255
9145 DATA0,0,0,0,4,0,16,8,0,32,16,64,32,16,64,32,16,64,65,8,128,34,2,128,20,2,0
9150 DATA28,2,0,14,2,0,4,4,0,8,2,16,16,1,29,32,2,31,64,4,63,192,4,127,224,65
9155 DATA127,240,225,255,241,227,255,255,255,255
9165 DATA0,128,0,0,128,0,0,64,0,0,64,0,0,136,0,1,4,0,0,136,0,16,208,0,8,224,0
9170 DATA4,64,0,9,32,0,10,16,0,18,4,0,10,8,65,132,16,65,194,16,65,242,48,229
9175 DATA226,121,239,228,255,255,255,255,255,255,255,255
9185 DATA0,0,18,0,0,145,4,1,34,2,1,20,68,0,136,40,128,204,73,0,24,46,0,17,28,0
9190 DATA33,2,0,17,33,0,11,66,0,7,36,0,7,24,0,7,160,0,7,192,0,7,192,0,7,224,0
9195 DATA15,192,0,31,240,0,63,255,255,255
9205 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,12,0,0,12,0,0,28,0,0,31,48,0,63,254
9210 DATA111,255,255,63,255,254,111,255,252,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
9215 DATA0,0,0,0,0,0
9225 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,14,0,0,14,64,8,30,128,4,255,0,3,255
9230 DATA128,63,255,252,63,255,248,31,255,240,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
9235 DATA0,0,0,0,0,0,0
9245 DATA0,0,0,0,0,0,32,0,0,32,0,0,36,0,0,4,0,0,4,0,0,0,0,0,0,0,0,0,0,0,0,0,0
9250 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
```

Morse generator for the C16

by Colin Macleod

This short program turns your 16 into a morse code generator. Letters and numbers typed on the keyboard are converted into long and short blips and output via the t.v. speaker. What use is it? Well, unless you want to learn Morse code none whatsoever! So we suggest you get cracking right away.



```
10 REM 'MORSE' - BY COLIN MACLEOD
20 CLR:CLR
30 CHAR1,16,0,"MORSE"
40 CHAR1,16,1,"[5G<T]"
50 PRINT:PRINT
60 VOL8
70 DO
80 GETKEYA$
90 A=ASC(A$)
100 IFA>47ANDA<58THENA=A+43
110 LOOPUNTILA>64ANDA<134
120 PRINTA$;
130 A=A-64
140 FORB=1TOA
150 READB$
160 NEXTB
170 FORC=1TOLEN(B$)
180 D=VAL(MID$(B$,C,1))
190 ONDGOSUB260,290
200 NEXTC
210 RESTORE
220 GOTO70
230 DATA12,2111,2121,211,1,1121,221,1111,11,122,212,1211,22
240 DATA21,222,1221,2212,121,111,2,112,1112,122,2112,2122,2211
250 DATA22222,12222,11222,11122,11112,11111,21111,22111,22211,22221
260 SOUND1,750,4
270 FORT=1TO75:NEXTT
280 RETURN
290 SOUND1,750,12
300 FORT=1TO125:NEXTT
310 RETURN
```





Mike Pattenden: Rock 'ard!

I am about to become a threat to the security of the nation. Following in the footsteps of Clive Ponting and Sarah Tisdall, I am set to leak state secrets because, I believe, Commodore User readers have the right to know. I can, then, exclusively reveal that the Home Office is using Vic 20s to transmit confidential information. A **man from the ministry** told me that they use the old warhorses as radio telex machines to transmit information between offices. "What kind of information?" I asked, ever conscious of my status as one whose vocation is to discover the truth and the dirt beneath life's formica top. "Well, I can't really say, but we send it at 50 baud." "Yes, very interesting but what *kind* of information do you send?" "Well, confidential really, but material useful to various security organizations, branches of the police etc." So now the truth is out (as it always will). This has been a public information Hotshot and I can make conclusively clear that I have not, nor at any time have I been vetted by **MI5** . . .

Another mortal blow to the software industry: **Nick Alexander**, Virgin Games supremo, is set to mastermind a new **SDP** public relations offensive. Will he, I ask, be extending his politics into the home computer world? If so, perhaps I can suggest a few games based on the party's leading lights. How about *Mad Doctor* for **David Owen**? Or maybe *Crosby Beach-Head* with **Shirley Williams**. Perhaps a speech synthesiser endorsed by Woy, sorry **Roy Jenkins** . . .

The things they say (1): A press release floated on to my desk informing me that **Domark** supremos **Dominic Wheatley** (son of the author Dennis Wheatley, incidentally) and **Mark Strachan** see themselves as the Bond figures within the software industry. What do they mean by this? Is their hair falling out?

The things they say (2): Another press release, this time from **Activision**, tells how the Barry McGuigan game incorporates "his unique skills and fighting style". As if! The game, of course, came from the States, where it was developed. There was, though, one minor addition. The original Barry McGuigan figure was, in fact, black . . .

I notice that the **Bryan Robson Super League** board/computer game reviewed this issue had chance cards like Monopoly. So I had a sneak look to see what was on them, only to be confronted by one which tells you that you're not covered for fire insurance. A sight tactless I feel . . .

Almost as tactless as **Supergran**. A sister magazine of ours took out the lucky winner of their competition to meet her. They were late and she proceeded to complain her way through the entire meal, hardly once talking to the lad who'd won. There, that destroyed your faith in guidy guidy old Supergran . . .

Shows are always good for gossip. Everyone has a little bit too much to drink or gets carried away with the atmosphere and lets things they rather wouldn't be heard slip. Such was the case at the **PCW Show**.

System 3 — whose stand you see in all its glory on this page — have had a few problems with their *International Karate* game. After being handed an advance of £15,000, the programmer decided that he didn't fancy doing the game after all. System 3 boss **Mark Kale** was left with a handful of background screens and badly burnt fingers. Someone new has been drafted in to finish the job, but rumours persist that there's a second mortgage riding on the success of *International Karate* . . .

One from the smut dept: **Orpheus**, the company of fairies who are currently putting the Young Ones game together, are thinking of doing another game hot on its heels. It's called **Kama Sutra** and it features two figures which you have full control over. It will come in a brown paper bag. (Could be a wind-up, that one.)

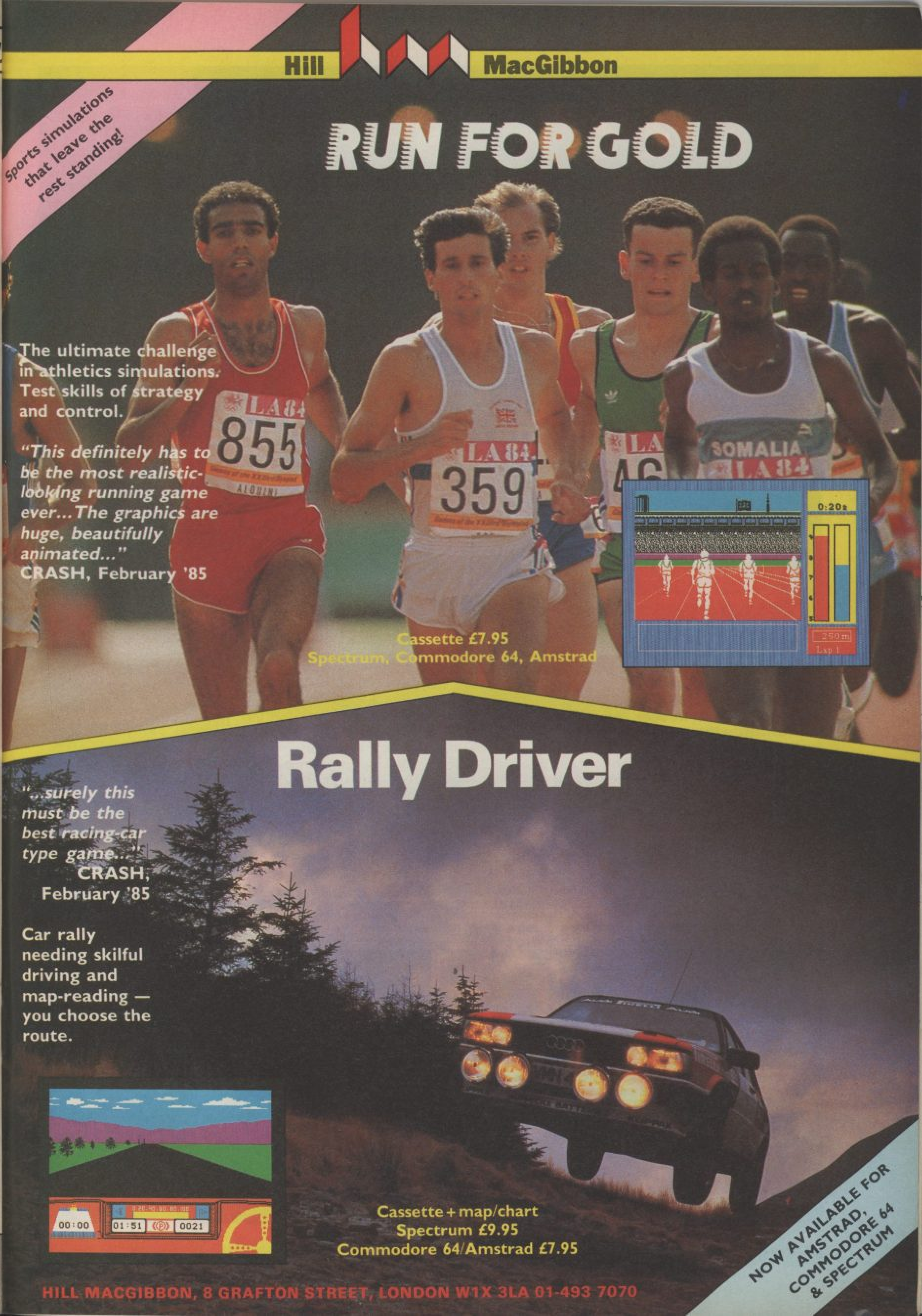
The Gospel truth for the **Young Ones**, though, is that they don't get on. Orpheus are having trouble getting them all in the same place at the same time. The major problem is Nigel Planer. It seems he now considers himself to be a Shakespearean actor. A picture will set you back £600.

One final little show nugget. **Geoff Capes** was there to help Martech promote their strongman game. However, Martech had to get rid of him, because he threatened to thump a punter. Mr Capes used to be a police officer . . .

I'll be giving out the dirt again next month. Meanwhile, sleeze lovers, keep 'em peeled.



This is what you might have seen if you were at the PCW Show. Among those watching who should have known better: Kevin Toms and our adman Gary Williams.



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MacGibbon
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CRASH, February '85
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Spectrum, Commodore 64, Amstrad
Rally Driver
"...surely this must be the best racing-car type game..."
CRASH, February '85
Car rally needing skilful driving and map-reading — you choose the route.
Cassette + map/chart
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Main Menu of the tuner enables you to save game, load game, play a new or old game and change the time allowed to play.

Beyond's hit game *Shadowfire* is the first computer game to have its own 'tuner' a device that enables you to change all the rules of the game and make each challenge different.

Commodore User is proud to be able to offer the Shadowfire Tuner exclusively to our readers only at a knock-down price of £3.50. The object of Beyond's superb icon-driven adventure game is to rescue Ambassador Kryxix and capture his kidnapper — the evil general Zoff.

To complete the mission you must either destroy or capture his giant spaceship — the Zoff V.

This is not easy as the ship is well guarded, Kryxix is hidden, and you have only one hour and forty minutes to complete all three tasks.

If the task seems like a tough one worry not because the rescue force, the Enigma team, are equally tough.

They are Torik the scout, the beautiful and devious Sevrina, Zark the master of communications, Sylk and Maul the warriors, and the vitally important Manto — the droid transporter.

The Enigma team and all their equipment are picked up and deployed using *Shadowfire's* unique icon selectors.

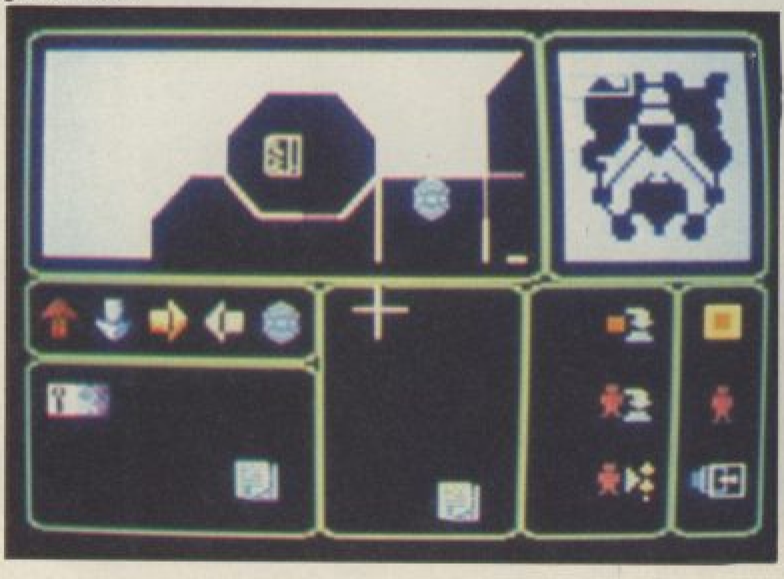
The tuner uses the same icon technique to enable you to re-design Shadowfire to suit your own particular tastes.

If you have rescued Kryxix and know how its done then the tuner will enable you to design a new mission.

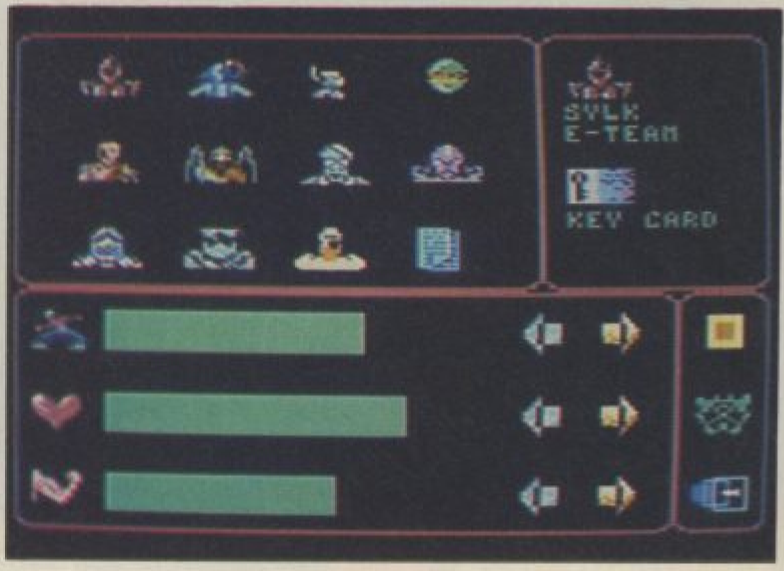
You can begin the game with certain members of the Enigma team captured as well. Kryxix can be imprisoned in a new location, the guards and Enigma team can be given new strengths and weaknesses.

Basically the tuner enables the Shadowfire

Top right shows map of the Zoff V. The grid moves around the ship showing a close-up of each part of the map above left as the grid scrolls.



Changing the strengths of the characters with bar charts and arrow icons.



THE SHADOWFIRE TUNER

player to take all his favourite elements and enhance them.

You could, for example, increase the speed of the Enigma team, arm them with more powerful weapons that weigh nothing at all and then just go on a mega killing rampage around the Zoff 5. If you've been thwarted by Zoff's guards in previous missions that idea will probably sound quite sweet.

There are really two ways to look at the tuner depending on how good a Shadowfire player you are. If you are pretty hot then you will want to use it as a design tool to set even harder missions.

If you have not yet penetrated the Zoff 5 and rescued Kryxix then the tuner will enable you to cheat your way to success.

The tuner is simple to use. Simpler than getting to grips with the game itself. So worry not — you won't need another fortnight off school or work to get through a second set of Shadowfire instructions.

Four master menus enable you to select the changes you want to make.

The first menu is for you to choose whether you want to save a game, load an old game or new game, with added icons to tell the computer whether you are using cassette or disk drive.

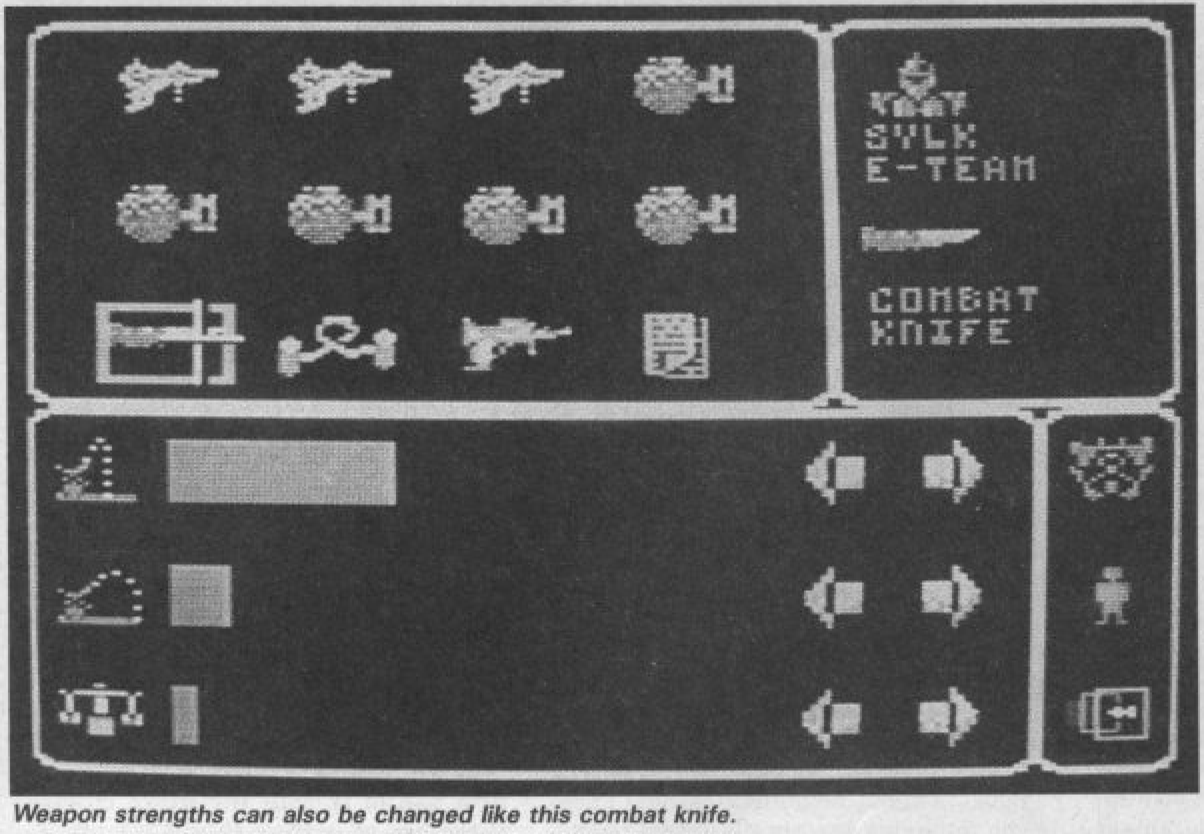
There are three more colour-coded screens to select modification to the ship (green screen) personnel (red screen) and the equipment (yellow screen).

There are comparatively few new icons to learn. These are strength bar charts for characters and equipment and icons to place items or personnel in certain locations.

Time is another parameter that can be changed — either more or less — and this is done with some new arrow icons.

Once you have decided what changes you want to make it all follows quite logically from the menu and the new items involved will appear fairly obviously.

Changes to the ship are fairly limited. You cannot actually design a new Zoff 5 but you can open and close doors and increase or decrease security so that the feel of the ship can be completely altered. □



Weapon strengths can also be changed like this combat knife.

To get your Shadowfire Tuner send a cheque or Postal Order for £3.50 to Commodore User Shadowfire Offer, Beyond, 3rd Floor, Lector Court, 151 Farringdon Road, London, EC1R 3AD. (Cut and fill in coupon). This offer ends 26th October 1985.

Name ....

Address ....

....

....

TOP TEN Word

Choosing a word processing package

by Karl Dallas

Following last month's in-depth survey of databases, Karl Dallas turns his attention to word processing packages, and picks the best ten available and tells you what to look for in them. Still to come in the Buyer's Guide series is a survey of spreadsheets.

Unless you've got an 80-column card and one of the WP programs that can exploit it, all word processors for the Commodore 64 or Vic 20 are something of a compromise, unless you're one of those people who likes a 20-character or 40-character printout, since it's impossible to get a WYSIWYG (What You See Is What You Get) display.

Some of the higher-priced packages offer sideways scrolling, in which the 40-character window scrolls across the text, which can be set much wider than the screen — as wide as over 200 characters, in some cases. Most of them offer word wrap, which doesn't break words at the end of one line and the beginning of the next, and has a superficial WYSIWYG appearance, though this is misleading.

Actually, WYSIWYG is something of a red herring, since even many WPs for 16-bit machines like the Commodore PC10 don't show you exactly what the print-out's going to look like, as far as things like underlining and bold-printing are concerned. And, remember, that a program that actually centres words on the screen will probably use up more memory than one which allows you to embed a centering command.

● **How much memory?** The first thing you should consider in WP is the amount of text memory allowed; it is amazing how different similar programs that have to be LOADed into the same amount of memory can be in this regard. However, with some programs you may find that as you approach the total memory available, things slow down to an unconscionable degree. This is the sort of thing you can only find out from experience — or in the shop.

● **Linking Files:** Equally important is the possibility of linking program files together, like chapters in a book, so that the limitation of memory is no problem. Another essential is some kind of view-to-screen, sometimes known as print-to-screen, which gives a better idea of what the eventual print-out will look like. This is useful in seeing where page-breaks fall and avoiding "widows" (the last line of a paragraph at the beginning of a page) or "orphans" (the first line of a paragraph at the end of a page).

● **Search and Replace:** Most programs offer some kind of search and/or replace facility, which would allow you to change all occurrences of a mis-spelled name (eg Smith) to the correct usage (eg Smythe). Some will change all occurrences, others will change them only after having checked with the user. Ideally, both options should be offered, with the choice of changing everything or just one or two.

Such changes should also have a "global" option, permitting changes to be made through a sequence of linked files.

● **Load and Save:** Check out the SAVE and LOAD options: is it possible to SAVE parts of the text in memory (usually known as block SAVE) or must all be SAVEd? And is it possible to APPEND new text at the end of what you've written so far?

● **Mailmerge:** The facility to send out personalised circulars into which the computer inserts names, addresses, salutations etc, is included within some programs. Others need a separate database to hold the names and addresses. If so, compatibility between WP and DB is important. Conversely, there are some mailing-list programs specifically designed to be utilised with WP. Again, check that both the packages you are looking at are compatible before you buy. If both WP and mailing-list program utilise ASCII sequential files, you should be OK.

In the end, the difference between a good word processor and one of the memory typewriters now coming on to the market is the flexibility it offers you. But remember, too, the more flexible a program, the longer it'll take for you to learn how to make the best use of it, and the more chances there are of getting things wrong.

MINI-OFFICE

Price (tape):	£5.95
Distributors:	Thorn-EMI Computer Software, 296 Farnborough Road, Farnborough, Hants GU14 7NF (tel: 0252 543333)
Author:	Database Publications
Format:	Tape
Text memory:	38882 characters

The database section of this three-part integrated tape-based package was reviewed last month. One of its unique WP capabilities is a "large editing" mode, producing double height characters. Also unusually, it also informs the user of typing speed, expressed in words per minute.

d Processors

TRIANGLE

Price (disk):	£19.95 inc VAT
Distributors:	Argus Press Software Ltd, Liberty House, 222 Regent St, London W1R 7DB (tel: 01-439 0666)
Format:	Disk
Text memory:	15600 chars (400 lines × 39 chars)

Another WP/DB/SS integrated package. The word processor allows up to 400 lines of text to be entered and for one file to be linked with the next on printing. There is no word wrap, so words are broken when they fall across the end of one line and at the beginning of the next.

The screen display is 39 characters wide and a display at the bottom indicates line number (starting, confusingly, at 000 rather than 001) and column position.

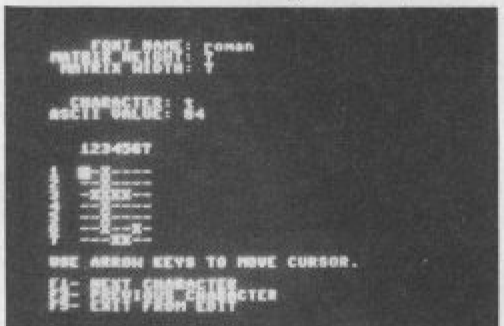
There are facilities for using the database section for a mailmerge including names and addresses in circular letters.

A block of a spreadsheet can be SAVEd as a document for merging with word processing, but it is important when defining the block width to ensure that it isn't wider than the WP software can handle.

FONT FACTORY

Price (disk):	£19.95 inc VAT
Distributors:	Impex Software Ltd, Metro House, Second Way, Wembley, Middx HA9 0TY (tel: 01-900 0999)
Format:	Disk

Valuable enhancement which will take any ASCII sequential disk file, such as are generated by most of the popular WPs,



and print it in a new typeface, which may be selected from one of the eight supplied, or may be specially designed by the user, and which can be printed double or single width. There's also a font that will provide full descenders on CBM 1525 and 801 printers.

The user has full control over line length, left margin, line-spacing, headers, footers, and justification. The program comes with its manual on disk, which can be printed out from within the program, which economises in price but complicates things slightly for beginners.

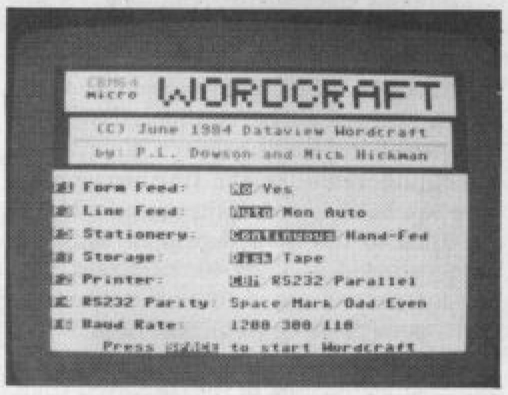
Also included on the disk is Signwriter 64, which permits the print-out of characters up to 12in deep. Both packages require either 1525 or MPS801 printer, or parallel printer with MW-350 or similar graphics interface.

WORDCRAFT 40

Price (disk):	£24.95 (cartridge version £89.95)
Distributors:	Audiogenic Ltd, 39 Suttons Industrial Park, London Road, Reading, Berks RG6 1AZ (tel: 0734 664646)
Format:	Disk/cartridge
Text memory:	26560 characters (322 lines × 80 chars)

The great grand-daddy of Commodore word processors, originally written for the Pet and now available in a variety of configurations, including an MS-DOS version for the PC10 and IBM compatibles, including valuable communications option.

The first title to try to get something like WYSIWYG format, with word-wrap, and



really bearing up against the competition remarkably well, without showing its age.

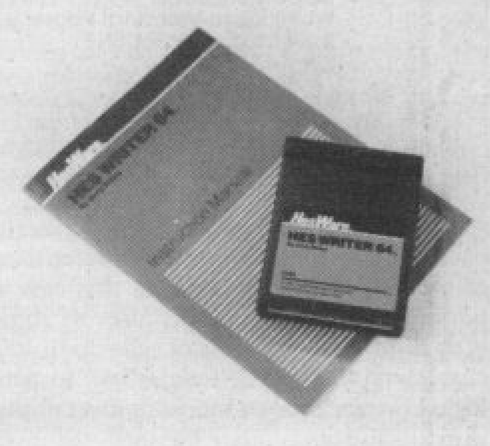
The disk version is probably the best value around.

HESWRITER

Price:	£29.99
Distributors:	Thorn-EMI Computer Software, 296 Farnborough Road, Farnborough, Hants GU14 7NF (tel: 0252 543333)
Author:	Jerry Bailey
Format:	Cartridge
Text memory:	26172 characters (727 lines × 36 chars)

Since cartridge programs seem to be going out of fashion — despite the fact that they provide the easiest way of getting up and running, and should also allow more text memory, or possibly because they're harder to copy — this workmanlike little program may not find a place on many people's list of priorities, which would be a pity, since it's quite nice, though beginning to show its age somewhat. Users may find its habit of numbering all lines in the left margin a little distracting, though this can be turned off. Word wrap is provided.

Facilities are invoked by typing the appropiate mnemonic at the beginning of any line and pressing <RETURN>, which is a little awkward. Insert will only work easily if the new characters don't exceed the line length of 36; if they do, then the excess is pushed down to a new line on its own, and the rest of the paragraph has to be reformatted (a complication it shares with the highly popular WordStar on CP/M machines).



There's a view-to-screen facility. As the brief but clear manual says: "On 40-column screens this will look a little strange, but it does save paper while you are checking out the formatting."

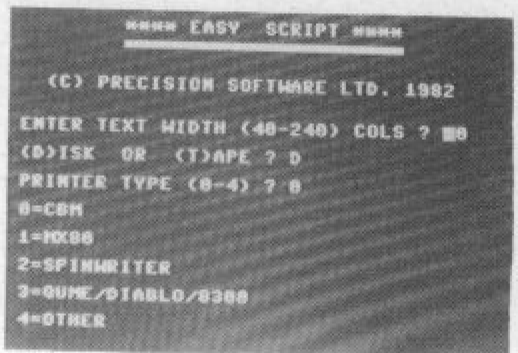
EASYSCRIPT

Price (disk):	£50 inc VAT
Distributors:	Commodore Business Machines, 1 Hunters Road, Weldon, Corby, Northants NN17 1QX (tel: 0536 205252)
Author:	Simon Tranmer
Format:	Disk
Text memory:	30560 characters (764 lines × 40 chars)

Probably the most widely-used word processor of them all, because it's been bundled with so many 64s, but well worth buying in its own right, now that the bundling is over. Includes mailmerge and there's a spelling checker on an additional disk (also £50).

View-to-screen, with horizontal or vertical panning to scroll the screen window across the text, either using the left/right cursor controls or <F5> to jump 20 columns to the right, <F7> to jump 40 columns to the right, <RETURN> to jump to the beginning of the next line, <CBM> to scroll downwards continually (paused by <SPACE>), <C> to the

next page, <V> to the middle of the next page. Reverse scrolling is not possible in this mode.



Recommended, but check out Superscipt 64, actually an upgrade, with many additional facilities.

PRACTICALC II

Price (disk):	£69.95
Distributors:	Practicorp, Goddard Road, Whitehouse Industrial Estate, Ipswich, Suffolk IP1 5NP (tel: 0473 462721)
Author:	Sandy Ruby
Format:	Disk

Another example of the way generic packages are acquiring the characteristics of other types of program, in this case a powerful spreadsheet, which uses its ability to display the contents of cells up to 100 characters wide as a "long label" to perform as a word processor, with most of the usual facilities.

It can read any sequential ASCII files produced by other programs and other Practicalc files, as well as Practifile database files.

It was originally configured for the Apple, as is obvious from the manual which needs a 24-page supplement of adaptations to be used on Commodore equipment. The "help" facility, accessed by <CTRL>+A (for assist) or F8, is comprehensive and instantaneous, though the information is printed out in capitals, which is less readable than upper-and-lower case. The 80-column option really needs a hi-res monochrome monitor to be readable.

SUPERSCRIPT 64

Price (disk):	£69.95 inc VAT
Distributors:	Precision Software Ltd, 6 Park Terrace, Worcester Park, Surrey KT4 7JZ (tel: 01-330 7166)
Author:	Simon Tranmer & Tom Cranstoun
Format:	Disk
Text memory:	20000 characters (500 lines × 40 chars)

Familiar to thousands of 64 users from the Precision-written Easyscript previously bundled with the computer, this is an extensive upgrade, taking into account the improvements incorporated in the versions for the 8000 and 700 series business machines. The new one is entirely menu-driven, so that it is possible to access even its most sophisticated commands without constant reference to the excellent ring-bound manual.

Pressing <F8> (or <F1> <H>) will produce a help screen, if the mnemonics are not immediately obvious. The menu is accessed by pressing <F1>, and each menu choice usually produces a sub-menu of more detailed choices. These are made by moving the menu cursor along to the required option, then pressing <RETURN>, or by pressing the initial letter of the chosen option. After a short time, the user learns the key sequences almost without trying. Any key sequence can be repeated immediately, and at super-fast speed, by pressing <CTRL> + <+R) immediately afterwards. This will always repeat the most recently used menu key sequence.

Superscript 64 now has a calculator function allowing up to 10 decimal places to be defined (2 are the default) and to multiply, divide, add or subtract (down columns or along lines), and either insert the result into a document or hold it in memory for display when required.

The spelling checker is now an integral part of the program, coming with a 30000-word master dictionary (the program disk offers US and UK options, one of which is copied to the working disk on setting-up the system), and a document in memory can be checked at any time. There is also a WORD SEARCH function which allows the user to type in a word the spelling of which is uncertain, and all similar words will be displayed. Wildcard characters <?> and <*> can be used in the usual Commodore way when typing in the parameters of the word to be searched.

Though documents can be word-wrapped on screen, like Easyscript before it, Superscript 64 does not offer a WYSIWYG display, though since the screen width can be configured for any number of characters between 40 and 240, something very like the finished appearance can be obtained, if the screen width is set equal to the desired printed width. If the screen width is over 40 characters, then horizontal scrolling is employed when the typist goes past the rightmost limit.

Insertion of print-formatting characters will change the look of the displayed page, and the more you use them the less like the finished result will the screen appear, but there is a VIEW DOCUMENT option, which strips away all the formatting, and shows the document more or less as it will be printed, highlighting special features like underline, bold, expanded and condensed type, subscripting and superscripting.

Superscript 64 can read Easyscript files, and will resave them in Superscript format if they are edited. This process is, however, irreversible; Easyscript cannot read Superscript files.

Superscript is available in a C128 version for £79.95 and can be LOADed into memory alongside Superbase 128 so the two programs can interact. C64 owners wishing to upgrade to either of the 128 versions can have them for £20 less.

MAILING LIST & LABELS

Price (tape/disk):	£29.95
Distributors:	Thorn-EMI Computer Software, 296 Farnborough Road, Farnborough, Hants GU14 7NF (tel: 0252 543333)
Format:	Tape/disk

Useful program which allows the printing of labels one, two or three across the page, and also the printing of a complete list. Use of the browse/select facility allows the selection of specific labels, and it is also possible to print only the addresses added at a specific session. Non-printing sort criteria can be entered on the first line of each record, allowing them to be sorted by name, postcode, account number, balance owing, or any other criterion that will fit on a single line.

There is no built-in mailmerge, but since the files are ASCII, the list should be accessible from within a WP program, as long as it can suppress the first line during print-out.

VIZAWRITE

Price (cartridge):	£89.95
(disk):	£79.95 (£99.95 inc Vizaspell) inc VAT
Distributors:	Viza Software, 9 Mansions Row, Gillingham, Kent ME7 5SE (tel: 0634 813780)
Author:	Kelvin Lacey
Format:	Disk/cartridge
Text memory:	34000 characters (425 lines × 80 chars)



Excellent and though it's not the cheapest, still a comparatively inexpensive program — when one considers how powerful it is — permitting a printed line-length of up to 240 characters. Text wordwraps, and to handle screen widths of wider than 40 characters the screen window scrolls sideways as you type past the 40th column.

There is now a much more powerful menu-driven version for the PC10 and other IBM compatibles. □

Next month concludes our Top Ten series with an introduction to spreadsheets and a round-up of the best packages available.

Precision Software's

Business Software Family

for your Commodore 128

Superscript — The Intelligent Word Processor

"If you need a sophisticated and powerful word processor . . . this is the ultimate."
Trevor Doherty, Commodore Horizons July 1985

What is Superscript? –

Superscript combines word processor, spelling checker, calculator and mailmerge facility, all in one package. So Superscript gives you all the tools you need to produce high quality reports, tables, lists, personalized letters and even labels quickly and efficiently. Superscript is a remodeled and vastly enhanced version of the popular **Easy Script** and **Easy Spell** programs that have sold more than 350,000 copies worldwide, so you ***know*** you can rely on it.

Simple for the beginner

If you are a newcomer to word processing, Superscript's simple command menus put you immediately at ease.
Each command is a single word, and for each command there's an extra line of helpful description. To select a command, you simply move the cursor. You don't even have to type the command!
Once you are more familiar with Superscript, you can bypass the menus.

Powerful for the experienced user

Superscript also gives you the ability to *cut work down to a minimum* by storing your own command sequences or text on single keys. This means that with a single keystroke you can reproduce commonly used phrases or multi-line addresses from a glossary, load in document formats or execute a pre-programmed sequence of operations. *That's intelligence!*

Editing options

Superscript gives you all the editing options of a business-style word processor, with full block manipulation for cut-and-paste; overtype or text insertion modes; search and replace with pattern matching and optional case discrimination; backward search; case shifts for single words or larger blocks of text. *And much more.*

Good with numbers

Superscript allows you to extend your editing line up to 240 columns for wide documents like financial statements, and with decimal tabs it's easy to enter properly justified tables of numbers.
Superscript's complete set of calculator functions can be used interactively, or you can operate on numbers from the text of your document. Apart from the usual mathematical functions like add, subtract, multiply, divide, and percentages, you have the ability to add rows, columns or even whole tables.

Good with spelling, too

The built-in spelling checker goes right through your text, checking the unique words against its dictionaries, and stopping at each one it does not recognize. You have the option to correct the error, learn the new word or ignore it. Superscript has its own 30,000 word dictionary. In addition, it stores new words as it learns them.

Mailings with Superscript

Personalized mailings are easy with Superscript. You can enter the data manually or use data extracted from your spreadsheet or database. Merging can be selective with equal-to/not-equal-to logic. A mailing labels template is included to help you complete your mailing and you can alter the template to suit your own label format.

Attention Easy Script users!

If you're an Easy Script user, then Superscript is the obvious choice. With its enhanced features and more powerful facilities, you'll be able to do so much more. There are no compatibility problems either. You can run your Easy Script data or Easy Spell dictionary disks under Superscript.

LOADS INTO MEMORY TOGETHER

Superbase — The Programmable Database

For sheer quality and professionalism, Superbase is in a class of its own.

Easy to get started –

The first thing you'll notice about Superbase is the superb 230 page owner's manual.
The tutorial section takes both first-time and experienced users right from first steps through accomplished programming, while the reference section is a model of completeness. You'll enjoy the manual's easy style, its plentiful illustrations and comprehensive index.

Easy to use –

You'll soon be ready to set up your own filing system - business information, professional data, records of all kinds. You design your record layout right on the screen, exactly as you wish it to look, with helpful on-screen explanations never more than a step away.
With the layout in place, you can then use Superbase's built-in commands to enter, change or delete individual records. Once you have built up a file of records, you can select, sort and output data exactly as you need it. To begin with, you'll be accessing Superbase commands through menus. The menus lead you step-by-step to the required action. Nothing could be simpler!

The hidden power –

As you become more familiar with Superbase, you'll want faster ways of accessing commands. One way is through the command line. Any sequence of menu options can also be typed directly onto the second line of the screen, known as the command line. *But this is just the beginning.*
The *real* power of Superbase is that you can string any number of these commands together to form complete programs. When writing programs, not only do you have access to the dozens of powerful Superbase commands: you can also use the complete set of ordinary BASIC language commands.

This capability turns a straightforward data management system into a true database of incredible power.

Developing complex applications for yourself becomes a realistic proposition, with your hardware configuration as the only limiting factor.

The integrated office –

Superscript and Superbase will actually load into the computer's memory together.
This means that you can switch between Superbase and Superscript at will passing information between the two and working on your filing system and documents without ever having to reload. *That's integration!*
Buy your copy today, and join the thousands of satisfied Superbase users worldwide. They've proved its power and flexibility, and realised its benefits:

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- ★ Built-in single drive back-up utility.
- ★ State-of-the-art indexing for fast retrieval: any record in less than 0.3 secs.
- ★ Fields may be added, and field specifications altered without the need to restructure the file.
- ★ Data types include calculated result for on-screen field recalculations, including full BASIC math functions.
- ★ Searches may be up to 127 fields deep, sorts up to 34 fields deep.
- ★ Report-writer generates fully formatted reports from responses to simple question-and-answer session.
- ★ Allows linking across separate files.
- ★ Includes free label printing program.
- ★ Supports all standard printer interfaces

Also available on Commodore 64, Atari 800XL, Atari 130XE, Apple //c and Apple //e.

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Amazing Amiga

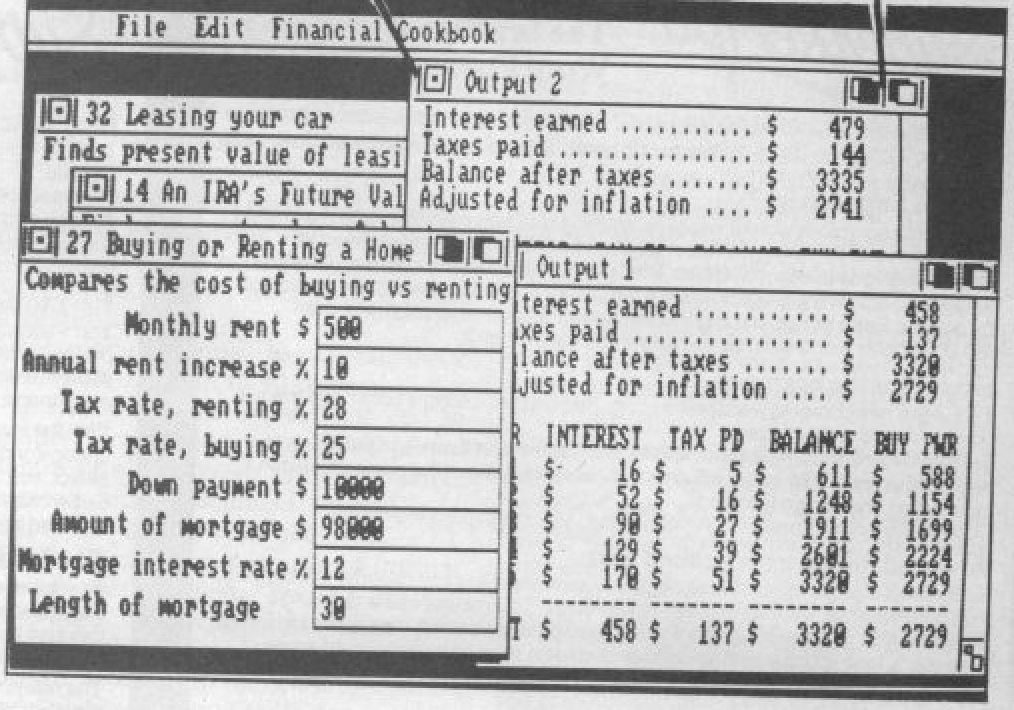
What makes Commodore's super-micro tick?

by Bohdan Buciak

Despite its recent launch in the States, the few Amigas lurking in Britain are being kept well under wraps. So when the company that wrote its most important software invites you to an Amiga demonstration, it's an offer you can't refuse.

Top-left window icon closes down task running inside that window (using mouse pointer).

Window icons to expand or contract window size and assign overlapping priority.



Electronic Arts' Financial Cookbook package running inside four windows.

THE OPERATING SYSTEM

The most important thing about Amigados is that it's a *multi-tasking* operating system. That mouthful means it will run more than one program at the same time. Confused?

Say you've written five graphic display programs for your Commodore 64. Not only would you have to display them one at a time, you'd stop one running before you could run the next one. With the Amiga, you can load them all simultaneously and display any or all of them on screen, using the Amiga's built-in 'windows' system.

Window breakthrough

The idea behind 'windows' is that the screen merely acts as a backdrop. You use a mechanical mouse to open a window (of any size) in the screen. The application, whether text or graphics, runs inside it and becomes known as a 'task'. Open more windows, each running a task. Overlap them, bring one to the fore, leave one at the back — the task is still running even though the window is covered by another one.

The effect is dazzling and is controlled with consumate ease using the mouse to point to various 'icons' at each corner of the window. There's even a thermometer-type display on the left side to tell you how much memory the program takes.

Amiga's *Workbench*, a housekeeping program you load when the machine's turned on, also uses windows. So a disk directory becomes a 'window' in which files are displayed pictorially as folders. Point the mouse and run the task.

The same goes for the various utilities offered. You can even design your own icons, maybe a 'notepad' to represent your wordprocessing program. And the speed with which you can create windows, expand, contract and close them again is phenomenal.

Grasping the concept of 'windows' and multi-tasking is difficult without actually using them and then it becomes easy and logical. What's not so obvious is that some of the tasks are the Amiga's own housekeeping functions which run at the same time as your program. Instead of saving immediately to disk, the Amiga saves to a buffer and then to disk a few seconds later. So you get the cursor back and carry on working, and then the drive starts whirring. It's weird.

'Windows' sounds so good that there must be limitations. Fortunately, there are very few. The number of programs you can run simultaneously depends only on the amount of memory you've got to store them in. The Amiga has 256K as standard and is expandable to five megabytes. You can assign priorities to each of the programs, or 'tasks' running so that less important ones don't hog the machine.

"We're trying very hard to get people to know who we are", confides Tim King of Bristol-based Metacomco. He's got a problem. Metacomco's name is attached to no blockbusting arcade games, no adventures — it just writes system software for the advanced 68000 family of processors (like the Macintosh and the Sinclair QL). What a turn-off.

But that didn't stop the press flocking down to Bristol recently to listen to Tim King spouting forth — on operating systems and languages, of course. And none of them fell asleep because King was demonstrating a Commodore Amiga and doing it with unrestrained enthusiasm.

So the secret's out. Metacomco, a British company, has written both the operating system (Amigados) and the Basic (ABasic) for an American designed machine. And despite Commodore UK's reluctance to publicise it (the Amiga won't be launched in the UK until January of next year), Metacomco certainly isn't keeping quiet about the part it's played.

"It was really hard work", remembers King. "I've done about 100,000 miles since January — feels like I'm permanently jet-lagged". But the Amiga team haven't been sciving either: "I know at least three members of the Amiga team with campbeds in their office. They even work weekends".

Nearly all the hard slog is now over, enabling Tim King to demonstrate a machine that's virtually complete. Still, what follows is information gathered from a pre-production model. Inevitably, some specifications may still be subject to change.

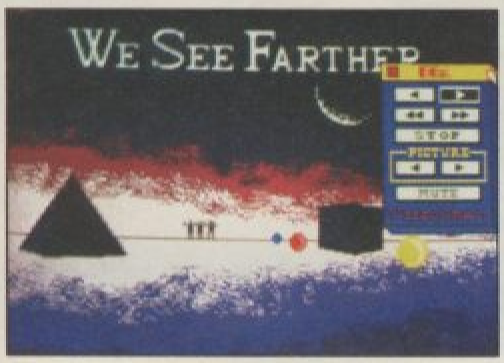


Other functions

● **The bit blitter:** This one's difficult to explain. One of its functions is to move areas of the screen around at great speed. So fast, in fact, that it can colour a complex shape, change it and copy it across the whole screen before you can blink. The potential for games is huge. And you could be calculating a spreadsheet or playing a tune at the same time.

The process works because the Amiga has 25 DMA (direct memory access) channels. Simply put, it means data can be moved around in memory without going through the processor — just like a ringroad avoiding towncentre traffic.

● **Tuning up:** Workbench also has a 'cusomisation' screen to let you 'tune' the Amiga to your liking. Pictorial sliders let you subtly change the RGB (red, green, blue) intensity. You can set the date, the mouse speed, whether keys repeat or not, alter the screen position on your TV, choose from a huge range of listed printers, set baud rates and choose from a set of fifteen text fonts.



● **Disk operations:** disk handling on Amigados is far too complex for this summary so here's a few of its more interesting facilities:

There is only one type of file which can be read sequentially or randomly. The file can be as big as the data in it, even if it stretches across a number of disks.

The file structure is 'hierarchical' so all directories can have a number of sub-directories. File names can be up to 256 characters long. They can also be date-stamped and have a 'message' tagged on to them (for example: "don't erase") which appears on the directory.

Recovering damaged disks will be easier because the directory cannot be corrupted. In fact, it's not a conventional directory in that each block of data has a header pointing both forward to the next and back to the previous block. Given one good block, you could probably salvage most of a corrupted disk.

● **Help you out:** Thanks to Amigados, the Amiga looks like being a very forgiving machine. It not only highlights error messages but lets you type in '*why?*' to get an explanation of what went wrong. There's also a way of putting a 'lock' on various disks so that the Amiga knows what's on them even when they're taken out. Insert a disk that has the wrong files and Amiga will tell you which disk to insert. If more than one drive is hooked up, Amiga lets you insert a disk into any drive.

● **Screen display:** the Amiga will display 32, 40 or 80 columns of text and a choice of graphics resolutions, ranging from 320 by 200 pixels to a very professional 640 by 400 (but you'll need an expensive monitor for that). Of course, the higher the resolution the lower the range of colours available, the lowest being 16. You can also mix different resolution 'windows' on the same screen.

AMIGA'S BASIC

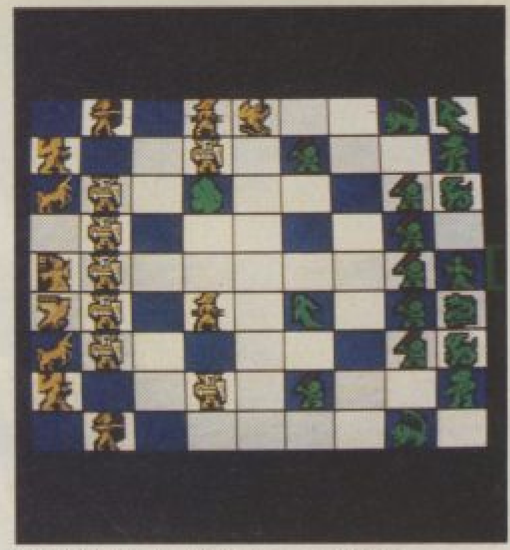
Basic on the Amiga looks and performs very differently to the Basic found on Commodore home computers. Generally, it looks more like Digital Research's Personal Basic (which Metacomco wrote for them).

Despite being 'interpreted' *'ABasic'* runs so quickly that 'compiling' it would make no noticeable difference. It should satisfy those programmers restricted by Basic but wary of machine-code.

Unlike the Vic, 64, 16 and Plus/4 machines, the Amiga doesn't load Basic immediately on power-up. Metacomco's ABasic is provided on disk (Lisp and Pascal are also available as alternatives). ABasic takes up about 72K of memory and is a very high-level version indeed. That means its commands are more powerful, more versatile and more can be achieved with fewer lines of Basic code.

That's especially true of graphic commands, which include functions for animation, moving and copying blocks at great speed controlling the 16 hardware and 16 software sprites. And, of course, incorporating graphics with incoming video signals.

The Amiga's built-in speech synthesiser



Electronic Arts Archon — games beginning to tap the power of Amiga.

is accessible from Basic and a few simple commands will have it chattering away. There's a choice of male or female voice. Pitch and intonation can also be controlled — a little deft programming and it will sound like a Smurf.

Here's a summary of some of the more interesting graphics and sound commands:

Conclusions

Computers based on the 68000 processor are all the rage right now, marking the rapid advance from 8, to 16 and now to 32 bit processors. Whatever next?

Of the current 68000 machines, only the Sinclair QL, the Atari 520 ST and the Apple Macintosh fall into the home/small business user range. But none of them have multi-tasking operating systems, the Amiga's potential for very hi-res animated graphics or its phenomenal speed.

Perhaps more important, none of them have the potential to attract all types users: gamesters, businesses, programmers, designers and more. There'll be no compromises either. Whatever the software, the Amiga's advanced specification will make sure it's at the leading-edge of technological advance.

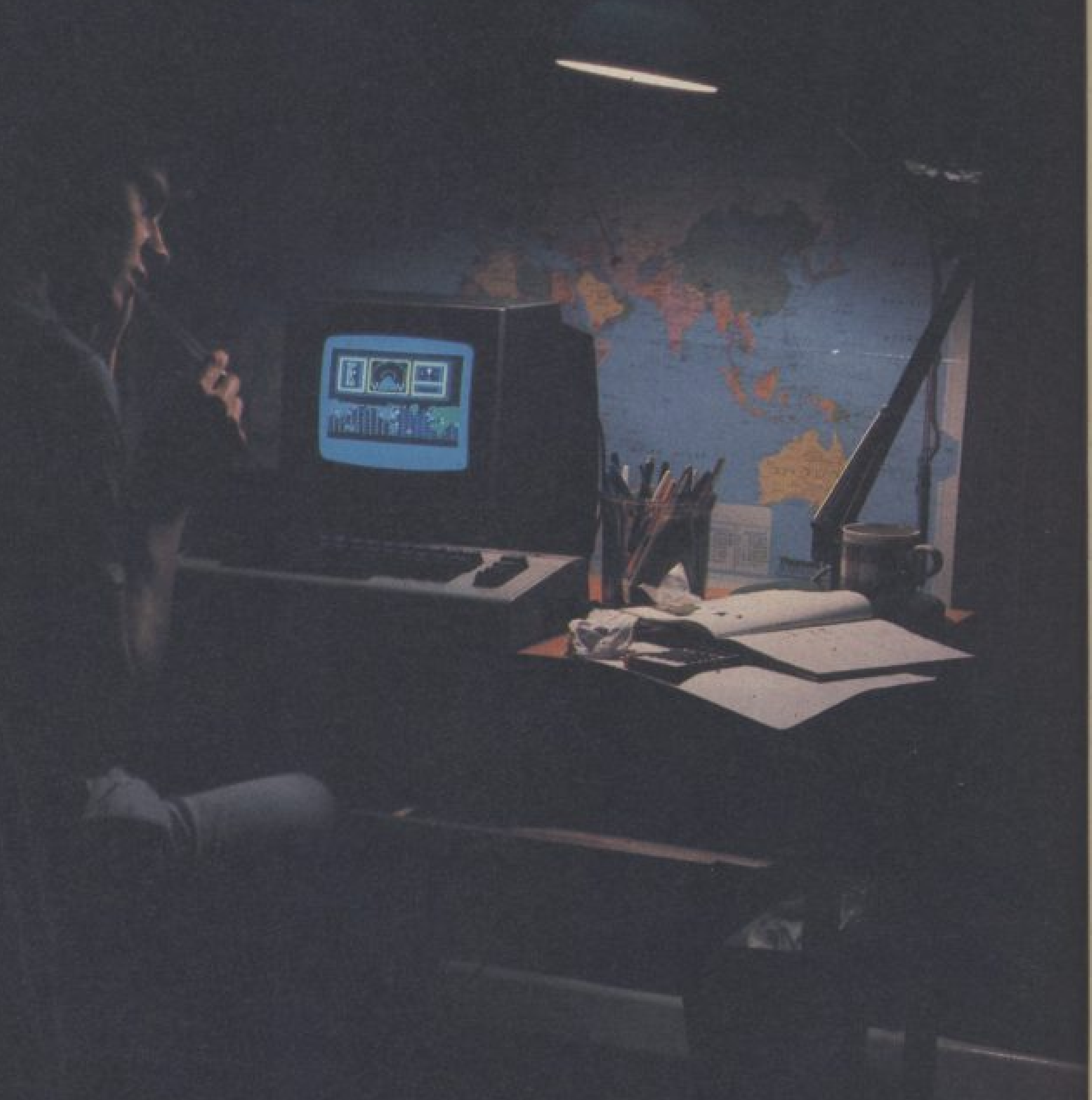
The problem remains the price. About £1000 will buy you an Amiga with built-in disk drive. But to take advantage of its graphics, you'll need a high quality colour monitor. That lot leaves you with no change out of £1300. At that price, only the Macintosh is more expensive. But you don't get a Roller for the price of a Mini. □

Graphic and sound commands

ANIMATE	controls position and view sequence of moving blocks/sprites
AREA	instant flood-fill of enclosed area
ASK	gives x,y position of cursor, mouse or window
BOX	draws a box
CIRCLE	draws a circle
FONT	gives a choice of 32, 40 or 80 columns
PAINT	fill enclosed area with pattern designed with PATTERN command
GSHAPE	define rectangular portion of display
SSHAPE	save the shape defined
MATAREA	define points of a shape
AUDIO	turns speaker on and off
NARRATE	speaks a text string
TRANSLATE	converts English text string to string of phonemes
PERIOD	controls pitch and duration of a sound
WAVE	sets waveforms for each sound channel

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64 eyes

by Chris Durham



Mona Lisa by ComputerEyes.

Three 64 video digitisers reviewed

The Commodore 64 is a versatile little machine. It will display wonderful graphics, play music and even speak to you. So far, though, it's not been able to see. That's all set to change with the number of 'vision' systems now available. We've looked at three of them: the American ComputerEyes, CRL's Print Technik Digitiser and the Beasty 'Snap'.

THE BEASTY SNAP CAMERA

Originally developed for the BBC computer, and costing just under £150, the Beasty Snap system, from *MicroRobotics,* is probably the most basic type you will come across. This is not to say that the applications are limited, just that the video capture method is very simple.

The system consists of a very small, lightweight, plastic camera, connected by a ribbon cable to the interface board. There is also a disk and a manual.

A simple Pentax 24mm lens was fitted to the review camera, but since this is a 110 size bayonet mounting it is possible to fit other lenses, including a 20-40mm zoom.

How it works

The lens focuses the image onto a light-sensitive RAM chip mounted inside the body of the camera. This chip has an array of 256 × 128 cells, each of which can store an electrical charge. To capture an image, all the cells are set to the fully charged state (1); the cells will then discharge at a rate dependant on the amount of light falling on each cell, the more light the faster the rate of discharge. Once a cell falls below a certain level it effectively turns itself off (0), thus after a given period of time, the array will contain a series of 1s and 0s relating to the pattern of light and dark areas on the array.

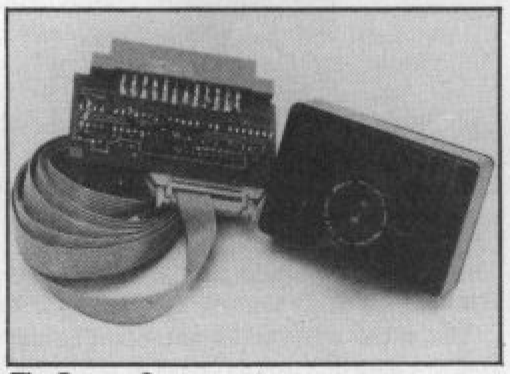
By varying the time before you read the array you can adjust the camera for different light levels (the exposure time). Once the exposure time is reached, the data is copied to the computer via the interface board which plugs into the user-port, the complete frame being transferred in only 64 microseconds. Inside the computer, software takes over and processes the image as required on to the screen.

The software

As with many similar add-ons, it is the supplied software that really determines how useful the system is going to be. Snap is supplied with four different programs: *EV1, Movie, Object* and *Search.*

EV1 is really the setting up and demonstration program. It shows you how to adjust the exposure to get the best picture and just allows you to 'play' with putting an image on the screen.

Movie allows you to record a series of images in memory, which can then be played back either singly or as a continuous sequence.



The Beasty Snap system.

Object shows how the system can carry out basic image recognition, identifying shapes irrespective of their orientation to the camera.

Finally, *Secure* allows you to check for changes in an image and sounds an alarm if the image changes by more than a predetermined amount.

Apart from EV1, which is purely to allow you to experiment with the camera, all the applications programs are good examples of the type of things that vision systems can do. Certainly the image recognition program could be applied to something useful or at least provide a basis on which to start.

My major criticism of all the programs is that not one of them allows you to store images on disk, nor print them out. To lose all the images you have taught the system every time you turn off the computer seems very silly, and it means you cannot store images for later processing.

Limitations

The first problem I found was getting the focus correct. Although there is a focus ring on the lens, this was not entirely accurate. Even in strong light, with a new image being produced on screen about every two seconds, I had great difficulty getting the image properly focused.

Another hardware problem is that there is a band across the centre of the array with no cells, giving rise to a discontinuity in the picture image. This is a design limitation of the chip manufacture and cannot be avoided. In fact, the software copes very well, and the effect is only really noticeable when it cuts out something which is important to the overall picture such as someone's nose!

The last hardware problem really boils down to the supplied lens. I found the 24mm lens could not capture a large enough image; even five feet away I could not get a full 'head' shot onto the screen. A wide angle lens or zoom lens would overcome this problem, as well as making it easier to use on smaller objects.

Apart from the limitations already mentioned, another facility which is available for the BBC version is the ability to capture a picture in a number of shades of grey. As supplied, Snap for the 64 only produces black and white pictures.

The manual

Although this is a photostat manual, it is quite readable. It is split into a number of sections which include suggested projects, industrial applications and the routines

necessary to include operation of the Snap camera in your own programs. The applications programs are all given separate pages which, together with the contents page, makes it easy to find the bit you want. The section on 'Suggested Projects' is useful and exactly the sort of thing that should be included in a manual.

Conclusions

For £149.95 you get a complete system for experimenting with vision, including the camera. The software supplied is useful and provides a good basic introduction to the sort of thing that can be achieved. However, it is by no means definitive and more software will hopefully be supplied in future to allow storage and printing of the pictures, plus the ability to produce images in shades of grey as well as straight black and white.

COMPUTEREYES

The ComputerEyes system, from *Stem Computing*, represents the more common idea people have when they think of video digitisers; it will accept an image from a number of different video sources including closed-circuit TV cameras and video recorders and disks. As such it is more versatile at getting the image into the computer compared to Snap, but after that it is again the software which dictates how useful the system is.

For just under £160 you get the digitiser (a black box which plugs into the user-port), a disk containing the applications software, and the manual. You do *not* get a camera included; that you have to buy separately if you do not already own one. While it is quite possible to spend over £200 on a good miniature CCTV camera, there are plenty of cheaper bargains to be picked up. The camera I used for the review cost only £69, being a refurbished black and white CCTV camera.

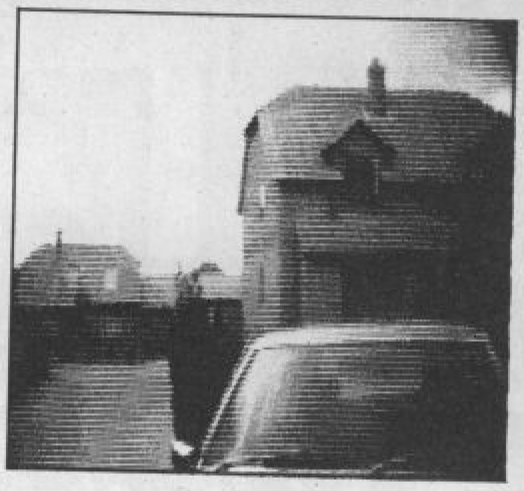
Since you can also use such a camera with a video recorder, you could have a versatile system for experimenting with computer controlled vision for £230.

Using the system

Because ComputerEyes uses a video source it is extremely easy to set up the camera, provided you have access to a monitor (as opposed to a TV). The output from a camera is identical to the signal which comes out of the video/audio port at the back of the 64; the camera can therefore plug straight into the monitor and you can adjust the focus (and other controls if fitted) to get the perfect picture before plugging in to the digitiser.

The applications software really consists of a single menu driven program. This allows you to adjust the synchronisation of the digitiser to that of the video source (this really only needs to be done once), adjust the brightness of the picture, allows various image capture methods and disk access. There is also a 'Help' option if you are unsure what to do next.

The software allows three methods of acquiring and displaying images. *Normal* gives a straight black and white image,



similar to that produced by Snap. *4-Level* captures four images with different exposure times to give a combined image with four levels of grey shading.

8-Level does the same, but with eight grey scale levels. Obviously, grey shading greatly enhances the picture quality.

But there's a penalty to be paid for better quality; because the computer needs to capture several images to build up the picture, the time needed increases accordingly. A normal image will be produced in about nine seconds; for four and eight level images this increases to 35 and 69 seconds respectively, much longer than Snap. This is because of the greater detail in the image (320 × 200) and larger data processing requirements.

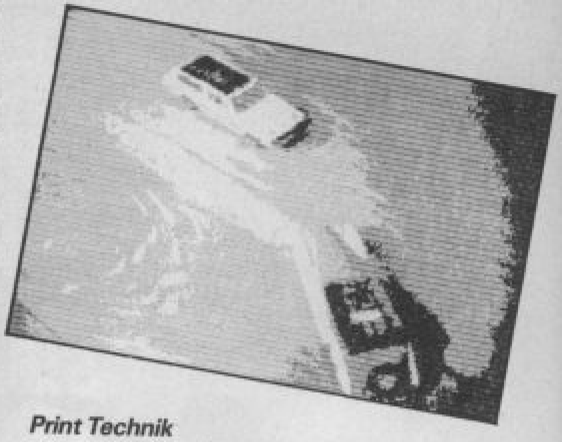
Having captured the image it is then a simple matter of storing it on disk from the menu. There are two ways to store a picture; packed or unpacked. The latter is the normal method of storing hi-res screen images and takes up 32 blocks on the disk. However, the 'packed' method compresses the data by taking advantage of the fact that large parts of the image are the same (either all white or all black for example).

The resulting disk file contains all the information to recreate the picture, but can cut down the number of blocks needed with a corresponding decrease in loading time later. In case you are wondering why you need the unpacked mode at all, most hi-res dump programs can only input a picture in unpacked mode.



The ComputerEyes system.

The other options on the menu allow you to view the current image at any time, access the disk directory and exit the program. Like Snap, there is no option to dump the image to a printer. The producers of the system, *Digital Vision Inc.*, say that there are so many different printers and interfaces on the market that it would not be possible to cover them all and that most people have suitable software to allow them to recall and dump the pictures anyway. While that may be so, I think it would not have gone amiss to in-



Print Technik allows four levels of grey.

clude a dump routine for the standard Commodore printers for those who may not be so fortunate!

The UK suppliers say they may include a dump routine in future releases, but nothing more definite than that. However, there *are* available a number of optional software packages which allow you to incorporate the images with a number of popular graphics programs and hardware devices.

The packages so far availalbe give access to *Koala Pad, Print Shop, Doodle!*, and *Flexidraw*. With the Koala package you can load the image as if it were a Koala picture, add colour, draw on it, add text and then print it out as normal. Likewise with Print Shop you can turn the image into a 'graphic' design which can be incorporated into posters, letterheads, signs etc, or used in the 'Screen Magic' option to load the picture which can then be printed. The big drawback of these packages is the price; a rather whopping £21.85 each!

There are very few limitations to the system itself, apart from those already mentioned; the lack of a printer routine and the time taken to capture an image. However, unlike Snap, there is no software supplied to allow you to do something immediately 'useful' with the system, like image recognition etc.

The manual

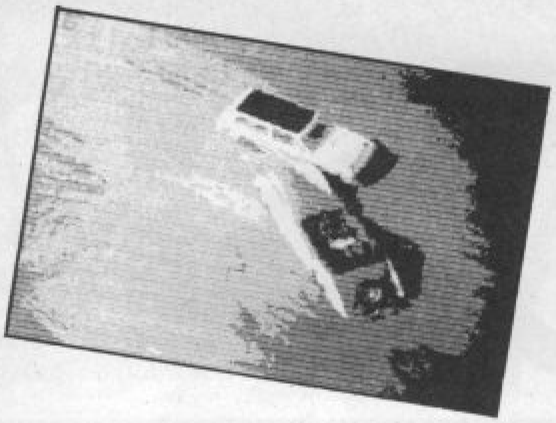
This is a 27 page booklet which contains all the information you should need to know. In addition to detailed instructions on using the system, it also includes the theory of operation, troubleshooting guide and how to operate the software from your own programs. This last item is particularly well done.

Conclusions

ComputerEyes is a true video capture system which can interface to a wide range of video devices. A camera is not included in the price and you must therefore budget for this if you do not already possess one. The software supplied allows images to be stored on disk, but optional software packages must be purchased before you can print out any pictures. I found it a very impressive system.

PRINT TECHNIK DIGITISER

This system, from *CRL*, is similar to ComputerEyes in that it uses identical video

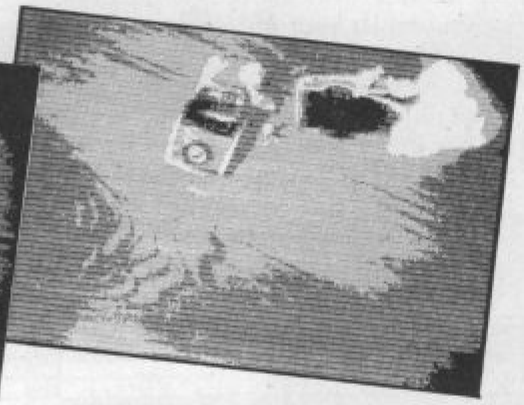


sources to capture the image. The difference is that it also comes with a good range of software, including dumping high quality pictures to a printer. The digitiser and software costs around £150 and includes a screwdriver (for adjusting the controls on the digitiser) and a phono plug for connecting the video cable. The software comes on disk, although it can be provided on tape or cartridge on request.

while the printer produces the full picture. When storing a Koala or Paint image this is limited to 200 × 160 for the whole picture since this is all these systems can handle.

Although the images are all in 4-level grey, I was not always impressed with the results. One problem is that there are two controls on the digitiser for setting the light level of the picture: brightness and contrast. It needs both of these to be set correctly before a really sharp image can be obtained, but because they are interactive to a certain extent it needs a lot of fine tuning. On one trial it took me about 15 minutes before I was happy with the settings. Nor could you just set them once and leave them; each different type of shot required different settings. It was the only system where I had to set up two spotlights in order to get good contrast on the screen; however this did improve the image quite noticeably.





Getting started

Like ComputerEyes, this system does not include a camera, you must already own one or buy one specially. The video camera plugs into the top of the digitiser, which plugs into the user-port. The main program is in the form of a menu, similar to the Koala Pad main menu; you move a little pointing finger around the screen to select the options. The scope of the options is extensive: no less than 7 different types of printer can be selected, plus the choice of user-port or serial port output. There is a built-in Centronics converter when using the user-port, allowing Epson and similar printers to be plugged in directly. Other options are to save pictures in either KOALA format or PAINT-MAGIC format for use on either of those systems, as well as a normal save and load facility. The directory can be accessed and there is an option to select 16 colour printing, although this in fact calls one of the other programs on the disk.

There are three main commands for getting a picture. *Digitise* activates the camera; the image being captured in 4-level grey in a remarkably fast 5 seconds. A new image can be captured by pressing the space bar. *View* allows you to return to the image at any time from the menu, while *Print* is self-explanatory.

Quality of the image

The stored image is larger than either of the other systems. It stores a full 256 × 256 image, with the screen acting as a window displaying any 200 × 160 portion,

You might think that the 16-colour (or 16 grey-level) might have produced a superior picture. Unfortunately the screen image is still limited to 4-level grey; only the printer picture is enhanced. The result is that it is very much hit and miss because what might look terrible on screen actually comes out looking superb on the printer.

Other software

The *Alarm* program is similar to that on the Snap system. It monitors a scene and sounds an alarm if anything changes. However, I found it not too reliable since it seems to aggregate the differences in each picture, rather than resetting the count each time. The result is that the alarm always went off eventually, even when nothing moved! If this *is* the case then it should be reasonably easy to solve. *Video Diashow* will display a series of Koala format pictuers in sequence, although you have to capture the images using the main menu program in the exact order you wish them shown. Also, the images must be on a separate disk, since the program just cycles through *all* the images on the disk ad nauseam. It is limited by the speed of the disk drive so is rather slow. Finally, *View* puts the necessary code in memory to allow images to be called from Basic programs using a SYS call.

Limitations

The biggest limitation of all is the manual. It is only 4 pages long, in very bad English and appears to be a direct translation from the original German. Compared to the other two systems it is appalling. There is only minimal information for the experimenter regarding location of code and picture images in memory and very little about the extra programs supplied; in one case I had to list the program to see how to use it!

Summary

The Print Technik system appears on paper to combine the good points of both of the previous systems; fast capture from a video source with lots of extra 'get-you-started' programs, plus the ability to dump the image direct to a large range of printers including colour ones. The fact that it can save images in Koala or PaintMagic format without the need to buy additional software is another plus point. Unfortunately, it is let down by the time needed to set the controls for the best image and that awful manual. However, if you want to produce *printed* images then there is no doubt that this is an excellent system when used in 16-level mode.

Overall conclusions

All of these systems provide a good introduction to the world of computer vision. Snap is cheaper and more basic, but you get everything you need to get started, including some good software. ComputerEyes is more versatile, easier to set up and use, but you have to buy a separate camera and it lacks much applications software. Finally, the Print Technik system seems to have all the advantages and is currently the only one of the three to allow printed images to be produced, but the manual needs urgent revision. The choice is wide open and really depends on what you can afford and what you want it for, but without doubt, the 64 has now acquired the 'all-seeing eye'. Big 64 is watching you! □

- Beasty Snap
- Commotion
  241 Green Street
  Enfield
  London
  EN3 7SJ
  01-804 1378
- £149.95 inc VAT

- ComputerEyes
- Stem Computing
  3 Blackness Avenue
  Dundee
  DD2 1ER
  0382 65113
- £159.85 inc VAT (£21.85 each software package)

- Print Technik Digitiser
- CRL
  CRL House
  9 Kings Yard
  Carpenters Road
  London E15 2HD
  01-533 2918
- Around £150

MOUSE

The Datex optical mouse reviewed

Mouse and icons are what all well-dressed micros are displaying right now. And the new Datex mouse, for the Commodore 64, tries hardest to look like the mousiest micro of all, the Apple Macintosh. Despite all that, it's still only a drawing package — a sophisticated one at that.

The Datex mouse comes as a complete drawing package — no extras needed. But at the whopping price of £74.95 that's how it should be.

The mouse itself looks similar in shape to the famous Mac mouse: two switches on the front and a rolling ball underneath. It looks and feels of good quality. And it is, being an 'optical' rather than a purely potentiometer-driven affair. Plug it into one of the joystick ports on your 64, load the graphics program (supplied both on tape and disk) and you're up and running.



Icons and pop-up menus in the true 'mouse' tradition

What you see on the screen is also pretty Mac-like, except for the giveaway Commodore screen border. The drawing surface takes up about two-thirds of the screen. 'Pull-down' menu options appear at the top, with the various drawing options depicted as 'icons' on the right side. Also on the right is a set of 20 background and spray patterns.

Drawing options

The major drawing 'icons' are: Pencil, Circle, Box, Filled Box, Paint-roller, Spraycan and Text. Point the mouse-pointer to the icon you want, press the button, and the pointer becomes the icon you selected. Now move it to the drawing screen and let your imagination run wild. It's as simple as that.

The two most exciting options are the Paint-roller and the Spraycan. Both use the set of 20 pattern boxes on the right. Select the Paint-roller option and one of the patterns and you'll fill the whole screen with that pattern. Paint-roller also fills enclosed areas.

The spraycan uses not only the 20 patterns but the eight 'brush' options at the bottom of the screen, to give a variety of drawing effects. There's a further 32 brushes on the Extras menu which can be selected, one at a time, to replace the existing eight. With that lot, you've got a huge amount of combinations.

But the options go much further. You can design your own 'patterns' to replace any of the existing 20 by choosing the ED SHAPE option on the *Extras* menu. That 'pops up' an eight by eight grid which you fill as required. The grid forms a quarter of the actual pattern square and is repeated four times. You can't rotate it, though, which may restrict your design a little.

The pencil option lets you draw only straight lines. Select a point, press the Select button (on the left) and 'stretch' the line to the required position. Press Select again to fix the line. The Release button (on the right) cancels a move that hasn't already been fixed.

Selecting the *Line* pull-down menu gives you two line thicknesses (one pixel fine), the option to invert or overlay crossing points and draw on an already inked area. That's pretty useful.

The Circle, Box and Filled Box options also work by fixing a point and then 'stretching' out the shape to the required size. It looks spectacular and works very easily.

The Erase and Text icons complete the range of drawing options. The 'eraser' icon simply rubs out anything you want removing from the screen. Selecting Text lets you 'write' onto the screen from a specified point. Using the Text pull-down menu, you have the choice of normal or italic, plain or bold letters (both upper and lower case). But text must be entered from the keyboard, one of the few occasions when the program isn't totally mouse controlled.

The pull-down menus

Four menu headings appear at the top of the screen. Point to any one and a list of menu options 'pulls' down. Options already set have a tick by their side. Selecting is merely a matter of pulling the menu bar over the option you want.

The Options menu lets you clear the screen, choose whether you're using tape or disk to load and save drawings, give your drawing a title and alter the speed of the mouse-pointer. The 'slow' option is very useful for intricate drawing.

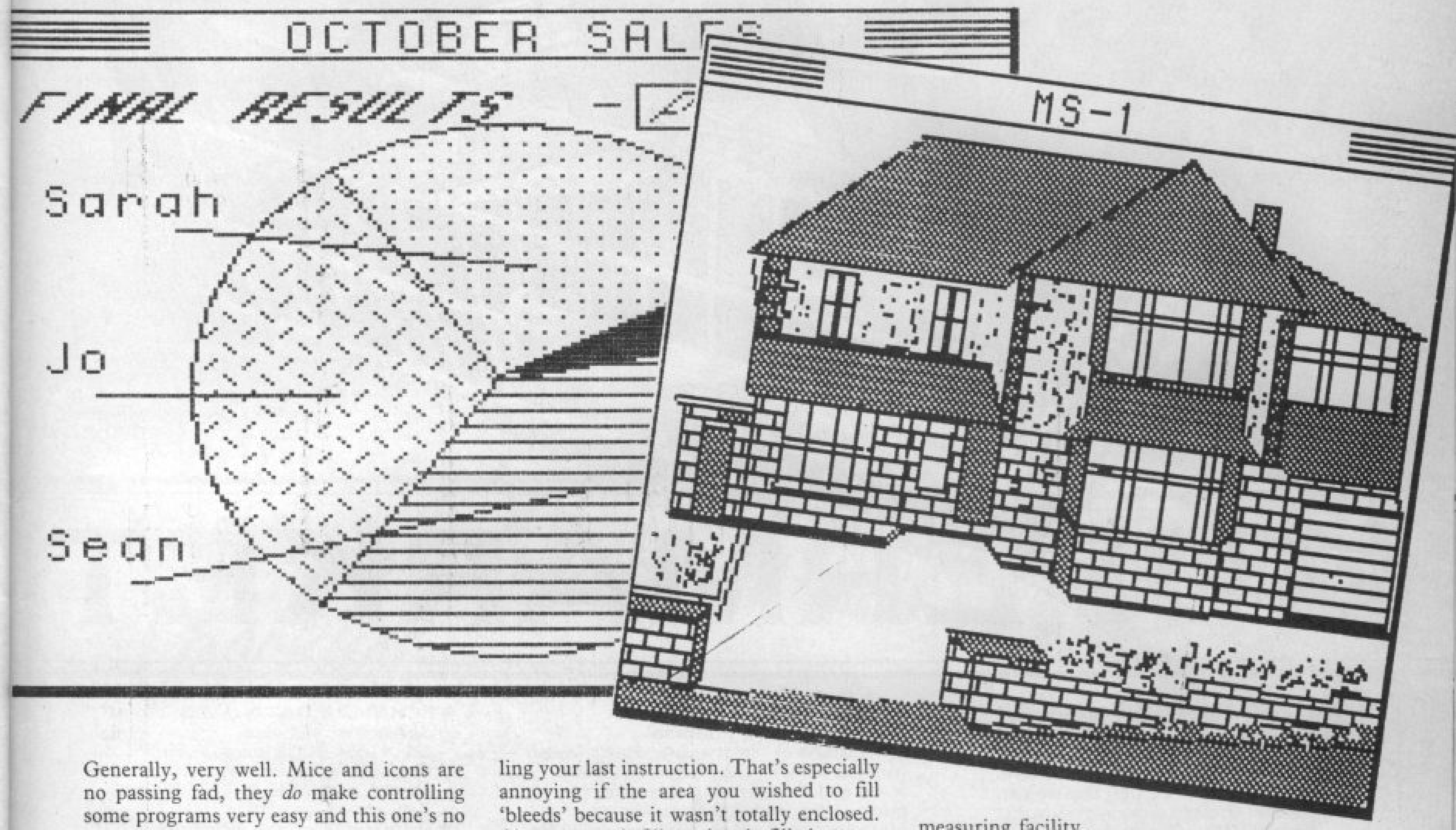
Apart from the options already mentioned in the Extras menu, there's the facility to load and save to tape or disk, 'Frame' a portion of your drawing and move it around (but not invert or rotate), and output to a printer. Driver software for Epson or Epson-compatible printers is included in the program. All you need is a cable (user-port to Centronics).

Using the program

The specification and facilities sound very impressive, but how well does it all work?

on the menu

by Bohdan Buciak



Generally, very well. Mice and icons are no passing fad, they *do* make controlling some programs very easy and this one's no exception.

Drawing is more natural than using a joystick as you move the mouse physically to correspond with on-screen movement. The program itself provides enough options not to constrain artistic flow. On the other hand, you really have to plan ahead and choose the best way of accomplishing a particular task.

A degree of precision can be achieved too, since the mouse becomes very sensitive when used on the 'slow' speed. Pushing it slowly (to get the most traction) lets you move around easily on an A4-sized area. So not much desk space is required. The faster you push, the less responsive the mouse becomes.

Limitations

Apart from the price, there are a few niggling limitations. One is the lack of colour. You're restricted to just two: one for the ink, the other for the background, but they're easily changed using the Function keys to select the 15 foreground and 15 background colours available.

Secondly, there's no facility for cancelling your last instruction. That's especially annoying if the area you wished to fill 'bleeds' because it wasn't totally enclosed. Also, you can't fill an already-filled area — but you can spray it.

Driver software for a variety of other printers, especially the MPS-801, should be available soon but you'll have to pay extra for it. A wide selection of printer software will be available on a utility disk offering a number of other functions: like expanding and compressing shapes, zoom and a routine to incorporate the mouse into your own programs. No price yet, but it could be around £15. A mouse-link to Superscript 64 may also be included.

Then there's the major problem of using it to do something really useful. At £75, it's not a toy for doodling with. In fact, some joystick-driven packages will let you produce sophisticated graphics at less than half the price. The Datex mouse is just very good at doing what it does, but it probably isn't sophisticated enough for the 'true' professional user.

Maybe designers would use it for room plans or circuit diagrams, maybe people with very basic computer-aided design (CAD) uses, or displaying business graphics — the major problem here being the lack of any built-in scaling or measuring facility.

Conclusions

There's probably too many drawing packages already available for the 64, with varying degrees of sophistication and varying ways of drawing — lightpen, joystick, touchpad and now the mouse. Trouble is, mice are expensive, especially the quality one Datex has used. And the question is whether such a device is really worthwhile on a machine like the 64.

Still, the software is very good and a positive joy to use. It's very well integrated with the 'easy to use' icon and mouse concept. Trouble is, it's just a whole lot too expensive. □

- Datex Optical Mouse
- EEC Distribution Services
  14 Western Parade
  Barnet, Herts
  EN5 1AD
  Tel: 01-441 1590
- Price £74.95 (tape and disk)



The Handic SUPERMARKET

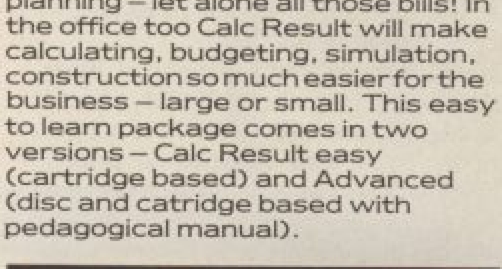
YOU can now buy the complete range of "off the shelf" Handic products by post, if you're not near a Handic dealer. All you have to do is make your selection, tick the boxes and send in the coupon with your remittance. We will pay the postage and packing and offer a full 14 day money back guarantee. Handic produce many software and hardware accessories for IBM and compatibles, the Commodore 3000, 4000, 8000 & 700, and of course the Commodore 64.

HANDIC DATABASE
Database, for example, is a brand new, cartridge and disc based software package. Especially designed for both, first time and experienced data base users.

For those of you who need to collate and store information for easy recall, data base can make life easier. The basic package includes a mailing list and 4 different print programs.



CALC RESULT
Calc Result, the financial spreadsheet for the 64, that's ideal for all those domestic headaches, such as loans, mortgages, home budgeting, stock portfolios, tax planning – let alone all those bills! In the office too Calc Result will make calculating, budgeting, simulation, construction so much easier for the business – large or small. This easy to learn package comes in two versions – Calc Result easy (cartridge based) and Advanced (disc and catridge based with pedagogical manual).

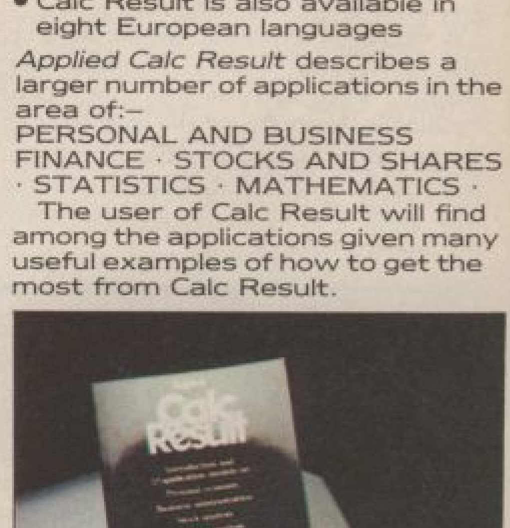




TECHNICAL DATA
- **Spread sheet size** 64 X 254 X 32 pages
- **Consolidation:** Easy with the 32 pages available in Calc Result Advanced
- **Printing:** Flexible printing formats out to most popular printers
- **Graph:** Histogram with scroll through feature rows and columns for printing
- **Colour:** Supports full colour down to individual cell level
- **Help:** Easy help screens available, at all levels
- Calc Result is also available in eight European languages

Applied Calc Result describes a larger number of applications in the area of:–
PERSONAL AND BUSINESS FINANCE · STOCKS AND SHARES · STATISTICS · MATHEMATICS ·

The user of Calc Result will find among the applications given many useful examples of how to get the most from Calc Result.



Take a look at some recent issues of *Commodore User* and you'll discover that the Commodore 64 has a habit of turning up in the most unlikely premises. Pet shops, comic shops, garden centres, travel agents — stamp dealers. Yes, stamp dealers. The story gets stranger by the month.

By Ken McMahon

STAMP on your 64



Now I've never been able to grasp the enthusiasm of stamp collectors, dealers and, for that matter, anyone involved with things philatelic. They seem to live in that impenetrable world of train spotters and star gazers.

But when I found out that Yorkshire stamp dealer (and enthusiast) Peter Maguire is using a Commodore 64 to run his business, it was time to rummage around for my trusty tweezers and rush for the next Inter City 125 to Leeds.

I arrive at Leeds station and search the car park. I'm looking for a bespectacled eldery gentleman, perhaps slightly balding, studying a copy of *Philately Today* from behind the wheel of a Morris Minor.

The real Peter Maguire emerges from his gold Renault Fuego GTX, he's forty-four, has all his hair and a fast line in conversation. During the drive to Halifax he tells me that when he's not selling stamps he's usually to be found playing valve trombone in a jazz band. And why not? But we've arrived at his house and it's time to get down to business.

The China Syndrome

Every seven weeks Peter holds an auction of Chinese and Far Eastern stamps. That involves compiling a catalogue containing several hundred lots. The economics of the stamp world are much the same as for any other business. People who collect stamps are prepared to pay for them. The rarer the stamp the more they will be prepared to pay.

Peter's most successful sale left him £3,000 the richer and a colleague in Switzerland once paid £44,000 for one stamp — we're not talking peanuts.

On a more down-to-earth scale, the presale estimates in Peter's catalogue range from a couple of pounds to a couple of hundred, with a total value of about eleven thousand. With all that money floating around it's obviously essential to keep track of what's coming and going, and perhaps more importantly where it's coming from and going to.

It doesn't take a computer scientist to know that the job of storing and manipulating large amounts of data is a task which computers handle better than anything else. But I was interested to know what prompted Peter to swap pen and paper for a 64 and dot matrix printer.



"My experience as a radar technician in the airforce killed me of any desire to pursue a career in electronics, but I do like gadgetry so I suppose I'm a natural sucker for computers." Not so much of a sucker that he went out and bought the first system he could get his hands on.

Two years were spent gleaning the pages of the micro press for information on how to buy the right micro before, almost in desperation, he decided the only way to learn was by actually getting his hands on one.

"I got to the point where I thought I could read about it forever. So I went down to Laskys and an honest salesman told me that an Apple was too powerful for what I had in mind." That's how he came to walk out of the door with a Commodore 64, 1701 monitor, 1541 disk drive and an MPS801 printer. And he didn't get much change from £850.

Choosing the software

The first application to be tackled was to produce individual mailing lists of regular bidders to whom catalogues are sent at auction time. A relatively simple task and easily achieved with the help of the *Dialog Database* by Dialog Software.

Files of bidders interested in a particular country or region's stamps are held on disk and printed onto labels when required. Hardly pushing the 64 to its limits, though, and there were many more tedious routine tasks worthy of the same treatment.

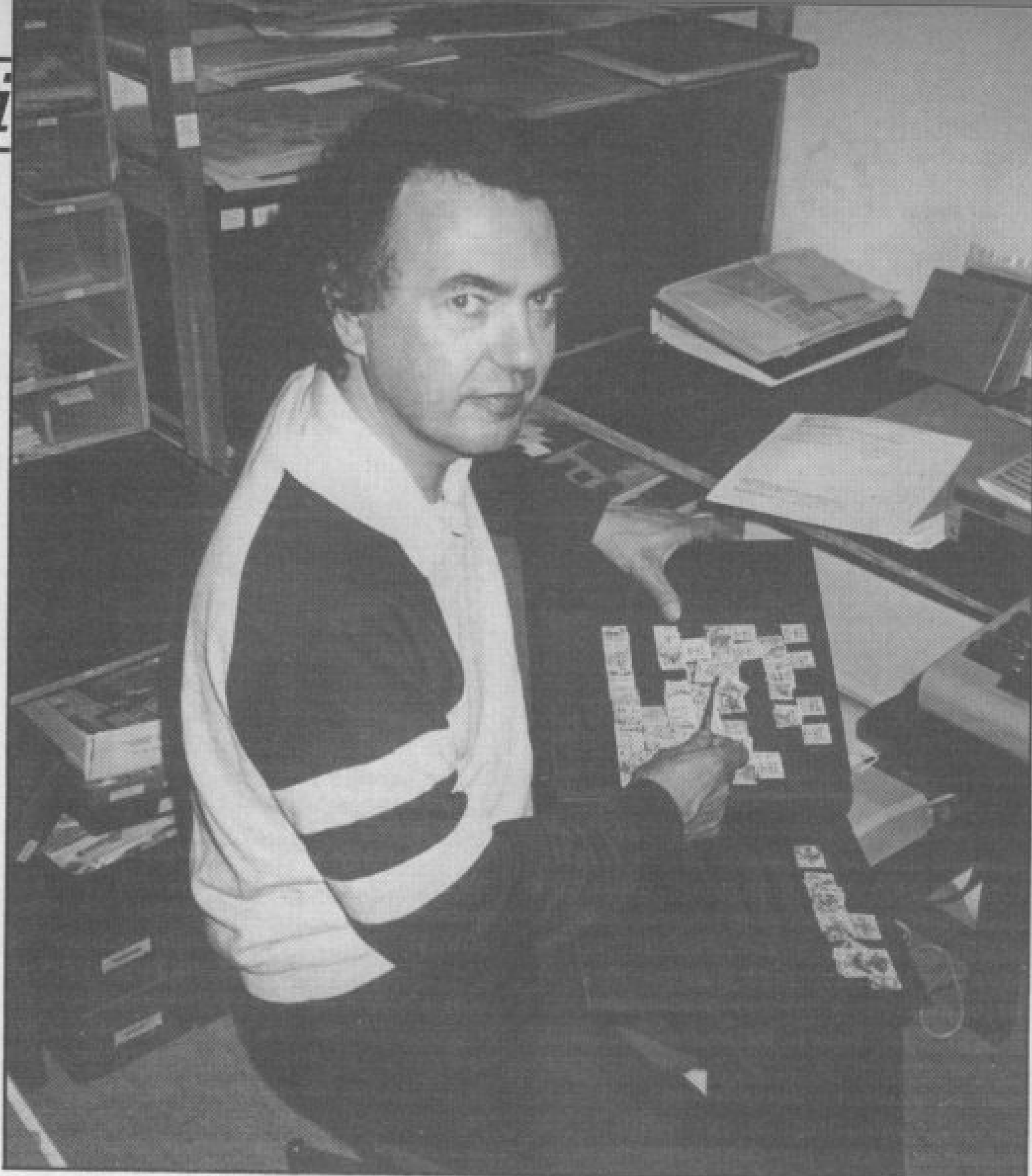
Before continuing the drive towards the Office of the Future, Peter decided to upgrade the software. "Dialog's not a bad program at the price but it does have its limitations. The limited file size can be a bind as can the lack of pattern matching in the search facility."

Most unnerving of all is that it stores complete files in memory rather than updating the disk, therefore running the risk of losing the lot should something drastic happen to the power. Or as Peter Maguire puts it: "Someone switches on the dishwasher, you get an electrical spike, and there you are."

The successor to Dialog was Precision Software's *Superbase 64*. As well as more comprehensive file handling capabilities, Superbase had just what Peter was looking for: a programming facility which would enable him to create his own tailor-made applications software.

Every auctioneer keeps what is known as a bid book. This contains details of each





Peter Maguire — "I do like gadgetry so I suppose I'm a natural sucker for computers"

lot, the pre-sale estimate (i.e. the price the auctioneer thinks the lot will fetch) and a list of who has bid for it. Peter's bid book is a little more versatile than most. He can obtain details on any particular lot within seconds and a further option lists every single lot together with the name of the highest bidder and the price. Thus the task of keeping track of who bid for what and how much is made a good deal less onerous.

When the bidding is closed it's time for stamps to be posted (the strangest thing of all when you think about it) together with invoices. The invoices are done on his home-made pre-printed forms and have a professional look about them.

Apart from the client's name and address they contain the usual sort of information you'd expect to find on a sales invoice — what's been bought, how much it costs and



the total. There is provision on the file copy for recording the date payment was made. What happens if it's not brings us to the next job.

Pay your debts

Tabs are kept on those reluctant to part with the readies. The Debtor File indicates the total amount outstanding since the close of bidding, the total amount received, and details of individual debtors. If required a nudge in the right direction can be provided in the form of a statement to the person concerned.



On the straight business side, Peter also uses Superbase for financial control. Bank balances, debits and credits are regularly monitored and updated. In addition the system provides accounting information in the form of a balance sheet.

Peter Maguire is obviously no slouch on the software front. He's also been busy upgrading the hardware to keep pace. The MPS has been replaced by a Micro P CPA80 which offers much higher quality print, not a difficult task as CBM printer owners will appreciate. The oh so slow 1541 has been given the go faster treatment with Supersoft's 1541 Flash!.

Future plans?

I'd intended to ask Peter what plans he had to extend the 64's influence into other areas of his work, but it seemed he had just about everything covered. His attitude to computerisation was nonetheless refreshingly sane.

"The main thing in this business is to discard things that don't work. You may have a pet program but if it doesn't work it goes and that's all there is to it. I've got a customer record file, but I'm beginning to



wonder if it's worth it. All I want to know is if they've bid at the last two or three auctions and if they haven't I don't send them another catalogue."

If there's a secret to Peter Maguire's success it's probably got more to do with his attitude towards computers than any particular knowledge he might have had. Firstly, he's a man who doesn't have much time for routine jobs and though he obviously enjoys his work, sees it merely as a means to an end. Secondly, he's well aware of the limitations on what can be achieved not just with his modest set-up but, for that matter, with any system.

"This is half the thing with equipment like this, you've got to accept its limitations. It's a bit spit and patch up with fast loaders and what have you, but it's cost effective. I've thought about buying a Commodore 128, but the only real advantage I can see is the 80-column screen which would be useful for word processing."

I've learnt two things from talking to Peter Maguire. The first is that although there are few places potential business users of the 64 can get good advice (few if any business dealers take it seriously enough), it's still possible to make a good job of it given a sensible approach.

The second thing? Don't take the mick out of stamp dealers. Anyone who can pay three grand for a half inch square piece of paper earns my undying respect. □



MICRO-SURGERY

Faults and repairs on your 64

by Fred Reid and Ken McMahon

Computers, like cars, are great until they go wrong. When they do go wrong most of us are left at a loss to know what to do. Commodore User's two roving trouble-shooters, Ken McMahon and Fred Reid, have produced an indispensible first-aid guide to what can go wrong, and how and where to put it right.

I've had my Commodore 64 for almost three years now. To look at it you wouldn't think so. The case is still clean and new looking, as are all the keys. Unbeknown to me, though, the forces of decay were working away deep within its bowels, until the other day — kaput, I'm left staring at a blank screen. It's somewhat ironic that the manufacturers provide a guarantee for the first year — when you're least likely to need it. So what happens when the thing refuses to work like mine did?

Extended warranty

If you're the worrying type, perhaps the easiest way to avoid forking out for hefty repair bills once the guarantee has expired is to take up the extended warranty offered by some of the well-known high street stores. For example, *Laskys* extended warranty scheme gives you an extra four years warranty at a price of £39.90 for up to £500 worth of computer and peripherals. If you're buying a complete system, say a 64, 1541 disk and a printer you would probably need to pay £47.90 giving you extended warranty on equipment to the value of £750. The agreement covers the cost of all parts and labour and Laskys let you have 28 days after the purchase date to consider the proposition.

Boots offer a similar deal. Here £20 gives you a three year guarantee on equipment to the value of £300 and an extra £5.95 buys you protection for £600 worth. The Boots deal is cheaper, but only gives two years extra cover as opposed to Laskys' four.

Needless to say, to take advantage of these schemes you must purchase the equipment from the dealer in question.

Home insurance

All well and good for the prospective buyer, but what if you've had your 64 for a while and it's nearing the end of its guarantee? If it's peace of mind you're after then probably the only answer is to insure it. If you already have a household insurance policy then you may not consider this necessary as most of them now include computer equipment along with other household items. However, the cover provided is usually pretty limited so it's worth checking your particular policy to find out just what it covers — some go further than others.

The *Home Plus* policy from Norwich Union, for example, covers your computer against accidental damage whilst it's in your own home. So if you tip your coffee over it whilst playing *Fighter Pilot* you've got nothing to worry about apart from the dry cleaning bill for your trousers — and it probably covers that as well. There are, however, a number of other eventualities not accounted for. Breakdown due to electrical or mechanical damage isn't covered and neither is damage caused by incorrect electrical connection. If you've had your 64 for over a year, the chances are that your software library is worth as much as the computer so you might want that covered as well. It's unlikely, though, that you'd find that catered for in any of the general home insurance policies available.

Commercial Union, The Prudential and for that matter most of the other big name insurance companies provide a similar type of computer cover as The Norwich. Though there's little to choose between them, there are a number of minor differences. With the Prudential, for example, you get cover for loss or damage from almost any cause, but the computer has to be included in the policy under a special 'All Risks' section, for which an extra premium is payable. There is also a £10 excess, which means you pay the first £10 of any claim. Watch out for the dreaded excess. In some cases it's as high as £25, making it hardly worth your while claiming in the case of average repairs.

Special insurance

If your home insurance policy doesn't provide adequate cover you might consider it worth your while taking out specialised computer insurance. One such policy is provided by Cornhill Insurance. It's divided into two sections, *breakdown* and *all risks*. Complete cover for £500 worth of equipment will cost you £34.50. For breakdown cover alone the cost drops to £25. On the hardware side you're covered for all risks including accidental loss or damage, and breakdown due to electrical, mechanical fault or whatever. Software is also covered, that is, tapes, disks, and the information stored on them. The big drawback with this policy is that there's a £25 excess payable on breakdowns. This means that in the majority of cases (unless something really drastic happens) you will bear the brunt of the repair cost. There is also a £10 excess on all risks claims.

A similar policy is available from Graham Brown & Co. of Guildford. Their premium rates are £3.25 per £100 worth of equipment insured. A £500 set up would therefore set you back £16.25. With this policy you pay extra for software cover, the additional premium being £5 for the maximum cover of £250. The excess here is a little more reasonable — £10 for all claims.

Back to Commodore

If you've neglected to insure your 64 and it does break down, then you'll naturally want to take it somewhere that will repair it properly at a reasonable price. Whether you should pack it up and send it back to Commodore, return it to the shop you bought it from, or take it to a local computer shop that carries out repairs depends on a number of things. There are important considerations other than cost, like how long it's going to take and the length of any guarantee given on the repair.

Commodore themselves are the most obvious choice to send it to — they, more than anybody should know what they're doing. There's a standard charge of £35 for any repair so, theoretically at least, it shouldn't cost you any more than that even if half the chips on the board have been cooked. Nor should you be machineless for more than a fortnight. Repairs carry a three month guarantee on the work carried out. As far as the price of outward postage goes, it won't be cheap, especially with the power pack (you'll have to include it because it may be the cause of the problem).

Repair shops

If you don't feel like entrusting your 64 to the Royal Mail it may be worth paying a visit to one of the many high street computer dealers who specialise in Commodore repairs. If you can't find one in the phone book, check out the advertising pages of **Commodore User**.

Probably the best place to live if you're in a hurry to get your 64 fixed is Glossop.



The *Video Vault* offers a same day service which in some cases can mean repairs done while you wait. If you live more than a bus ride away you can send it in the post, in which case it'll probably take just over a week. Average cost of repairs is around £32-£35 and that includes a three month warranty on the job.

Glossop may get first prize for speedy repairs, but Manchester has the edge on price. *Mancomp*'s charges start at a mere £23 — cheap by Commodore standards. If you suspect that there's more wrong with your 64 than twenty-three quid is going to put right then ask for an estimate which, incidentally, comes free of charge. Mancomp reckon to have your machine ready in about ten days.

Moving south, *Newcrown Computers* of Luton have a standard charge for repairs. The only difference between them and Commodore is theirs comes ten quid cheaper at £25. Again there is the almost universal three month guarantee and, provided you can pick it up from the shop, you'll have your machine back inside the week.

Last to get a mention is *Chromasonic,* in Archway, North London. When my 64 went up the creek that's where I took it. They will charge you between £30-£40 for a repair. Included in the price is an estimate, but if you decide not to go ahead it will cost you a fiver. There is a three month guarantee on Chromasonic's work — one which I didn't have to take advantage of.

High Street chains

The advantage of taking your computer to a high street name, such as Boots, John Menzies or W H Smith, is that they can be found just about everywhere. However, they will usually not repair the machine unless it was purchased from them. In the majority of cases they only act as a middleman between you and a repair firm, quite often Commodore themselves, the result being not only more expensive repairs, but longer delays. For example, Menzies standard charge is £37.50 and they take two to three weeks. Boots take around two weeks and charge £39.50 though, in fairness, they do offer a six month guarantee which is longer than you'll find anywhere else.

Finding a good value repair is like buying anything else. You have to shop around to find the best deal. Unless there's a standing charge it's always wise to ask for an estimate. If

REPAIRS

Videovault 140 High Street West Glossop	04574 66555
Mancomp Printworks Lane Manchester M19 3JP	061-224 1888
Newcrown Computers 76B Dallow Road Luton, Beds LU1 1LY	0582 455684
Chromasonic 48 Junction Road Archway London N19 5RD	01-263 9493/5

INSURERS

Cornhill 57 Ladymead Guildford, Surrey GU1 1DB	0483 68161
Norwich Union PO Box 6 Surrey Street Norwich NR1 3NS	0603 22200
Prudential 142 Holborn Bars London EC1 2NH	01-405 9222
Graham Brown & Co Pannels Court Guildford, Surrey GU1 4EY	0483 65651

FAULT DIAGNOSIS CHART

SYMPTOMS	POSSIBLE CAUSES
Computer is completely dead:	Blown fuse in mains plug Faulty power-pack or cables/connector
Red power lamp lights, but nothing else happens:	Faulty power-pack or cable/connector Blown rectifier (CR4), or regulators (VR1 and VR2) Internal fuse is blown
Keyboard produces wrong characters or is dead:	Dirty contacts on CN1 Faulty CIA #1
Joysticks don't work:	Faulty joystick or CIA #1
Cassette motor doesn't work:	Transistors Q1, Q2, Q3 In/Out port on 6510 CPU Faulty cassette machine
Printer and/or disk drive don't respond:	Serial cable or connectors Faulty CIA #2
Computer fails to power up 'Ready':	Shorted address/data line on expansion port Faulty address manager chip (82S100)
Computer continually resets itself:	Dirty mains supply Shorted Reset line on expansion port

you think it's too high don't feel obliged to accept it, get a second opinion. One last point. Whilst it's a good idea to check out the more readily apparent causes of computer death — plugs, fuses, dirty contacts, etc. don't start poking around with things you don't understand. If you create a bigger foul up than you started with, don't be ashamed to explain what you've done to the repairer.



HOME REPAIRS

Before you rush headlong into DIY repairs remember, although you have to wait, if the machine is still under guarantee it's not going to cost you anything to have it seen to. More importantly the Commodore guarantee states clearly that it is invalid if the machine is opened up. So be careful. That aside there are many minor faults that you can sort out for yourself.

Weak spots

The most vulnerable parts of the Commodore 64 are undoubtedly the two **CIA chips**. These interface chips handle all the communication between the computer and the outside world. The keyboard, cassette, disk drive, printer and many more peripherals are interfaced through these chips, and it doesn't help that they are naturally fragile anyway.

The user-port can be used to control a great many things, I drive a printer from it but you needn't stop there — the user port is a very versatile means of control. Problems can occur if you accidentally connect up wrongly, or if the equipment you are interfacing to develops a fault. It is very easy to wreck the CIA that handles the user-port!

The other major weak spot is the **expansion port**. The address and data lines that appear at this port are directly connected to most of the components inside the machine, and form the all-important communication network that is the very heart of any computer. The expansion port is used mainly for ROM cartridges, but there are various interfaces and gadgets that make full use of the facilities available on this port, such as Commodore's CP/M cartridge. If the expansion port's lines are abused, either by a peripheral malfunction or by over-enthusiastic experimentation, the damage can be severe.

A common example of this relates to the expansion port 'mother boards' that allow many cartridges to be plugged in at one time. The problem is that the mother board is usually just that — an unprotected printed circuit board, with all its copper track and soldered joints accessible to things metallic, ensuring the possibility of lots of short-circuits and a premature demise for your 64!

Fault finding

If you intend to carry out the repair work yourself it is obviously important to pinpoint the fault. If, like most of us, your heart skips a beat at the thought of opening up your beloved computer, any repair man would benefit from a precise description of the (alleged) fault. Let's face it, the quicker he fixes it, the sooner you get it back, and it might even end up costing you less!

The first step to computer diagnostics is known as 'elimination'. If you're having trouble loading from cassette, try borrowing a friend's cassette machine or ask him to try your C2N with his 64 and note the difference. A friendly local dealer might also help. Swop peripherals around in an attempt to localise the fault but don't forget all the cables, connectors and wires — perhaps the most obvious source of trouble. As a rule, however, disconnect all peripherals not directly related to the fault before attempting diagnostics.

Let's assume you've got a fault on the serial bus, neither your disk drive nor your MPS 801 printer are responding to commands from the keyboard. The serial bus is controlled from CIA #2, along with the user-port, the RS232 signals on the user-port, and the VIC's memory bank selector. If this chip is dead, you could lose your picture completely, and anything driven from the user-port as well (although this is less obvious). If nothing is responding on the serial bus, the fault will almost certainly be with CIA #2.

Another common fault affects the keyboard. It causes certain keys to produce the wrong characters, or even no character at all. All the signs point to CIA #1 as it is used to scan the keyboard matrix, rows and columns. There is, however, a more common and easily repaired fault that produces the same symptoms, simply a bad connection between the keyboard and the main PCB. If you remove the socket that connects the keyboard to the main board, clean the pins and replace it, you usually find the fault has vanished. A duff CIA, on the other hand, can't be cured that easily.

Another common source of trouble is the power supply. The 64's power-pack is a sealed unit and if this should become faulty (again, test it on another 64 if possible) your best bet is to return it to Commodore. Before you do this, check the wiring in the mains plug, check the fuse, and try another appliance in that mains outlet to be sure it really is the power-pack that is faulty. If the red power lamp on the 64 is lit, but nothing else works, you could check the fuse inside the 64. It is via this fuse that some (but not all) components are supplied with power.

Finding components

All the major components inside your 64 are custom made and can only be obtained from Commodore or their distributors. These parts are the 6510 CPU, the two CIAs (they are both the same), the 6567 VIC chip, 6581 SID chip and the ROMs. All the other components are readily available from electronic component retailers (pick up any electronics magazine for their addresses). Once you have obtained the spare parts needed to effect a repair, you will need to fit them. Some of the 64's chips are mounted on sockets making for easy removal and replacement, but on recent models all the chips are soldered in place. Removing a chip from the board is not a job for the faint-hearted or the inexperienced, but fixing a loose connection or a broken PCB is a lot easier. A good soldering iron and a de-solder pump are essential for these sorts of jobs.

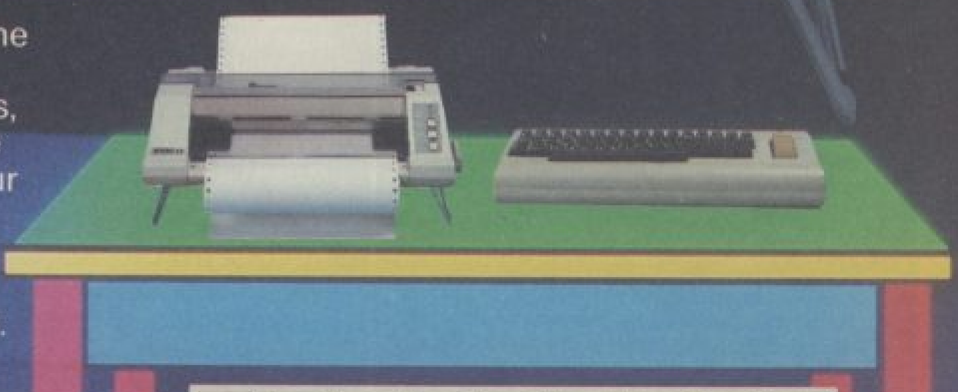
If you attempt to do repairs yourself and you make a mess of it, all that's left is to let the professionals at it. Don't try to hide your work or pretend you haven't touched it, tell the engineer exactly what you've done, he'll understand. It's worth mentioning, though, a messed up DIY job can easily cost more to put right than the original job would have cost, so if you are in any doubt as to your skills, don't hesitate, call in the professionals (they also guarantee their work)! □

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Motor mania

***Dear Tommy*, I have recently acquired a Commodore 64, and as yet I must admit that I have succumbed to the temptation of the many excellent games available, rather than making any serious attempt to program it myself.**

I have one game in particular (*Grog's Revenge*, US Gold) which uses the Novaload system, and loads perfectly in around 2½ minutes. However, I am slightly perturbed by the fact that when the program has loaded, and the tape PLAY button has released itself, the motor of the tape machine continues to run. Is there any way to stop it? If not, will running it for an hour or more at a time damage it in any way? I have tried pressing the STOP button immediately the program has loaded (before the very end of the tape is reached), but still the motor whirrs away. This only happens with this particular program.

It is worth remembering that the motor is under control of the computer, not the user. Bit 5 of address 0001 controls whether or not the motor is running, but this address also controls things like the Basic and KERNAL ROMs. What has happened is that the programmer has forgotten to take account of the cassette motor by not resetting bit 5 after swopping out one of the ROMs.

There is little you can do other than to pull out the cassette connector from the rear of the computer if you don't want to leave the motor running. Running for long periods won't actually damage it, but it won't do it a whole lot of good either! By the way, it isn't only this particular program; the *International Soccer* cartridge has the same effect.

Two easy questions

***Dear Tommy*, I have some (easy?) questions for you:**

- **What is the difference between LOAD "PROG",8 and LOAD "PROG",8,1?**
- **What is a "diskmonitor" and what does it do?**

I look forward to hearing from you.

LOAD"PROG",8 will load a program to the normal start of Basic, i.e. 2048, or wherever the start of Basic has been moved to. **LOAD "PROG"8,1** loads the file into the area of memory that it was saved from; e.g. if it was saved from the area starting at 49152, then that is where it would be stored in memory when you did the load. You will realise that this is essential for machine-code programs, especially if they have jumps to absolute addresses in the code.

Your second query is slightly ambiguous. It could be a program to carry out diagnostic checks on a 1541 disk drive or, more likely, it is a disk-based machine-code monitor program. A monitor allows you to look at areas of memory, alter memory locations and a host of other facilities involved with writing and storing machine-code routines and programs.



Tommy is our resident know-all. Whether you've got a technical problem on the 64, 16 or Vic, Tommy's at the ready with pearls of wisdom, advice and information. Go on, write to him: Tommy's Tips, Commodore User, 30-32 Farringdon Lane, London EC1R 3AU.

It's not cricket

***Dear Tommy*, I have recently written, in Basic, a cricket based game on my Commodore 64. It uses random numbers for scoring etc. But at the present time it is quite useless because every time it is loaded, the first game result is always the same. I have experimented and found that the random number sequence when first used is always the same. I have tried it on other machines so it isn't a fault of mine. Could you please tell me if there is any way of avoiding this?**

You will be pleased to know that there is a very easy way of avoiding this problem. I assume you are using **RND(1)** each time? This will always give the same sequence from start-up, because the initial seed is always the same. What you must do is add the following line at the beginning of the program (or in the initialisation routine):

5 X + RND(− 1) (X is just a dummy variable, you can put any variable here). This will have the effect of re-seeding the random number generator so that you always get a new start seed and hence a truly random sequence. Howzat?

Blank screen

***Dear Tommy*, Could you please tell me how to stop the 64 from blanking out the screen while loading. I have always wondered how it was done but could never find how to in any magazines or books.**

There is no easy way to stop the screen blanking in a normal LOAD because this is incorporated in the KERNAL routine. The only way would be to direct the LOAD jump vector to your own machine-code routine to do the load instead. However, the reason the screen is turned off is to stop the screen refresh cycle from interfering with the timing for the LOAD. If you did try to load a program with the screen on you would almost certainly get an error. Turbo loaders etc use their own load and timing routines, so avoiding the problem. Unless you are up to writing your own loader routines I should just accept the blank screen.

Text problems

***Dear Tommy*, I have a 40/80 column card for my Vic-20, and wish to write a simple Text editor, since no software is available for use with the card.**

Whilst I can build up text by concatenating strings, and recall the strings to the screen, I have not found a way of editing the strings without keeping all the original string plus all the deletes and reprints of the modified string.

I was hoping you could help me with this.

Without knowing which 40/80 column board you are using I cannot give you any detailed help; however, I can hopefully point you in the right direction.

Most 40/80 column boards do not use the normal screen area, instead they reserve part of the memory as a screen area

CLASSIFIED

C16 Word Processor Text 16. Powerful word processor. Facilities include: auto centre text, variable tab, insert, amend, delete, copy, move text, right justified, word count etc. Fully menu driven with comprehensive easy-to-use instructions. Great value. Cassette £5.95.

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Both programs can be used with all direct connect C16 printers including 1520 printer/plotter. Fast delivery by first class mail. Send cheque/PO to A & C Software, 75 Oakthorpe Gardens, Tividale, W. Midlands B69 2LF.

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CBM 64 plus CN2 datasette, with packing, Softchip, basic, Joystick, assorted software and books. Tel: 0625 29646. £180 ono.

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WARNING

It is illegal to sell pirated copies of computer games. The only software that can be sold legitimately through our classified section are genuine tapes, disks, or cartridges bought from shops or by mail order from software houses. *Commodore User* will press for the maximum penalties to be brought against anyone breaking these rules. We regret that due to large-scale swapping of pirated software we can no longer allow swaps of tapes, disks, or cartridges in our classified section.

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Commodore 64 for sale CSN cassette recorder 1541 disk drive. Loads of software on disk and tape £250. Call 01-788 8749 between 6-9pm.

64 Games for sale Titles include tapper, airwolf, Forbidden Forest, and Twin Kingdom Valley. Total value £89. Will sell for £25. Ring 567 7659 and ask for Ross Young, evenings.

Computer Pals required for C-64 User. Write to me using a tape (C64 only) and I will reply. Axel Bührmann, 77A High Street, Grahamstown, South Africa.

I want to exchange software on the CBM 64. I would buy software, too. Please send me your list. Thanks! Torsten Kirste, Frankenstr. 11, 7500 Karlsruhe-1, Germany.

SX54 plus 1701 Monitor with disk software worth over £200 plus books worth over £150 for a total price of £500, phone evenings Harpenden (05827) 3911.

CBM 64 C2N Cassette over £530 software, including Simons Basic, Currah speech unit, 43 games, 10 in current top 30. £70 worth of books. Only £350. Telephone 01-948 3866.

Free MPS 801 printer, boxed hardly used when you buy my boxed 1541 disk dirve plus boxed Easyscript, Easyspell, Easycalc, Easyfile plus utilities plus games for £250 ono. Billinghurst (040 381) 4767.

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Radio Ham with CBM 64 would like to contact other hams to exchange ideas in computer-radio comms. Please write to: Mr W. Shone, 7 Barnes Road, Widnes, Cheshire WA8 0LQ.

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Swedish 64 owner wants to swap programs with everybody. Disk and tape. All letters answered please enclose a list. Write to Daniel Mostrom Box 4022. 550 04 Jonkoping, Sweden.

Quick Sale needed Commodore 64 MPS801 disk drive. Phone Epsom 41128 £450 ono the lot. Individual sales considered. C. Bryant, Flat 1, 57 Ashley Road, Epsom, Surrey.

CBM64, C2N recorder, Joystick, programmers manual, various cassettes, complete ITEC magazines, extras, bargain £130. 6pm-8pm, 22 Hill Road, Muswell Hill.

CBM64 tapes to disc (originals only). Send details and SAE to: P.J. Mansell, 6 The Fir Trees, Thorpe Willoughby, Selby, N. Yorks. YO8 9PR.

Norwegian CBM 64 owner wants to swap programs and tips with people all over the world. Have both disk and tape recorder. Send your list to: Roar Vikene, 6090 Fosnavaag, Norway.

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which is then transferred to the video board to drive the monitor. There are two ways you can proceed.

One is to store the text as bytes in memory and then directly alter the memory locations. When you do a delete you just move all the text from the end of the delete up to the start point of the delete, thus overwriting the text that was there before. You must reorganise your end of line markers to maintain the line width, but this is really a case of counting characters and looking for the nearest space to the end of the line width. By using a machine code routine you can transfer the current area of text to the area used by the screen memory, thus being able to see the current situation.

The other way is to use the area where the screen stores the text and alter that directly. As you scroll off the top of the screen you transfer the text lines to a storage area for later printing. If you are trying to do text editing using the normal Basic string functions then you will really run into a lot of trouble, not only with the points you have mentioned, but garbage collection delays as well. The only real way is to write a number of routines, which can be in Basic if needed although rather slow, to get characters directly from the keyboard and then use the whole of a large block of memory (suitably protected) as the storage area.

Don't forget that you can store any ASCII value in a byte of memory and then play around with it to your heart's content. It doesn't matter that the computer stores it as a number, as far as you are concerned it is a text character.

Test your chips

***Dear Tommy*, I read 'Tommy's Tips' a while ago and noticed a chip test on the Vic-20. I wonder if it's possible to get one for the 64? (I am considering buying a second-hand one.) Also any problems with used 64s?**

Always willing to oblige, here is a test for a 64. It will only check the RAM memory, starting just past the end of the program. Note that it uses Easy Enter command strings so make sure you translate these and don't type them as printed:

```
1 REM 64 MEMORY TEST
PROGRAM
2 REM IT TAKES A LONG TIME
TO RUN!
10 PRINT "[CLR]"
20 FOR A = 40225 TO 40959
30 X = PEEK(A): PRINTA;"[CU]"
40 POKE A,0
50 IF PEEK(A) <> 0 THEN
GOSUB 100: GOTO 80
60 POKE A,255
70 IF PEEK(A) <> 255 THEN
GOSUB 100
80 POKE A,X:NEXT A
90 END
100 PRINT "FAILED":RETURN
```

Regarding problems with used 64s; make sure you test all the keys on the keyboard including upper case, and make sure that the cassette port will load programs correctly. These are two points I have known to be wrong with some computers, but try and see something running on it if possible. If all that checks out then you probably have a good machine.

Buy an SX-64?

***Dear Tommy*, I wonder if you could help me? I am thinking of buying an SX-64 (the portable Commodore 64) and would like to hear your comments. I have been told that I cannot connect a tape deck. Is this correct? Or is there some way of plugging into the cartridge port? Do you have any idea why the SX-64 is not really widely available? Thank you for your help and I look forward to reading your answers.**

What you have been told is correct; you cannot use a cassette recorder with the SX-64. I have seen a hardware modification published to allow a cassette to be attached. However, there is the snag that the Kernal ROM routines have been amended to make device 1 (the cassette device number) illegal, so Commodore really don't want you to use one! There is no way that you can plug it into the cartridge port, the cassette power line does not appear there for a start.

You might be able to rig up a connection to a standard cassette with its own power supply, but I really don't think it would be worth the effort.

As to why they are not widely available, this is largely due to the price when it was first introduced. It appeared to be very much a 'toe in the water' exercise for Commodore. There was a very muted response when it first appeared and it has never really taken off in a big way. I should keep an eye open for a second-hand one if you really want an SX-64; they do not appear to be great value for money when new.

Keep it clean

***Dear Tommy*, Referring to your comments in the June issue of *Commodore User* on the regular use of a head cleaning kit for the 1541 drive, I have a "BIB" cleaning diskette but am unable to use it.**

Having inserted the diskette after applying the cleaning fluid I am instructed to remove it after approximately 30 seconds.

Could you tell me how to operate the drive for the recommended 30 seconds? I can find no instructions or guidance on this point. Help would be much appreciated.

This is a typical Catch-22 situation. The manual says run it for 30 seconds, but without a valid formatted disk in the drive, it stops after about five seconds and a lot of head banging. What you have to do is to keep the disk going by a series of commands for 'about' 30 seconds; the actual period is not that critical.

I always do a series of **LOAD "$",8** by ignoring the error message that results and just moving the cursor back to the same line and pressing return again. It is the contact of the disk head on the cleaning disk that gets rid of the dirt and in order to find out that there is no directory, it must try to read the disk; therefore the head must connect with the disk each time.

Catch-22 for the disk now, it doesn't know there is no valid disk until it's already been in contact! It also tries to read the directory 2 or 3 times before giving up, so it will get a good 'wipe' each time. Note that there is little point telling it to load a file; it has to read the directory to know if the file is there!

Sprite collisions

***Dear Tommy*, I have encountered a problem with Sprite-background collision detection. The problem I have is that I can detect the collision but I cannot differentiate between the characters it might hit. The Sprite might hit a character and the collision will be detected but I do not know whether the character hit is an 'A' or 'B'.**

Is there a location I can peek to tell which character has been hit?

I'm afraid there is no simple answer to your problem. There is no register that records which character has been hit. As a routine to detect the exact nature of such a collision would be extremely complicated, perhaps a more logical approach would be to anticipate what characters are likely to be involved in a sprite collision, PRINT the relevant characters one at a time, and test that character with the Sprite-Data collision register before proceeding.

Reset button

***Dear Tommy*, My friend has just bought a Commodore 16, and I noticed it has a reset button on the side. My Commodore 64 hasn't got one. Is a reset button any use, and could I buy one for my 64? Answer much appreciated.**

Pressing the reset button on the C16 is not quite the same thing as turning your machine off and then on again. The difference is that if you use a reset switch, most of your memory remains intact. Any machine-code programs in memory when the reset button is pressed will not be touched by the reset action. Any Basic program in memory before a reset will disappear, but can easily be reinstated by manipulating a couple of pointers with the aid of a good machine-code monitor.

If, during programming, you accidentally 'crash' the machine, careful use of a reset button can restore the machine to the state it was in immediately before the crash.

You can make your own reset button for the 64 very easily. The microprocessor's RESET line appears on the expansion port **(pin C)**, the serial socket **(pin 6)**, and the user port **(pin 3)**. If any of these pins are shorted to Ground (available on all of 64's rear-panel sockets), the microprocessor is forced to do a reset.

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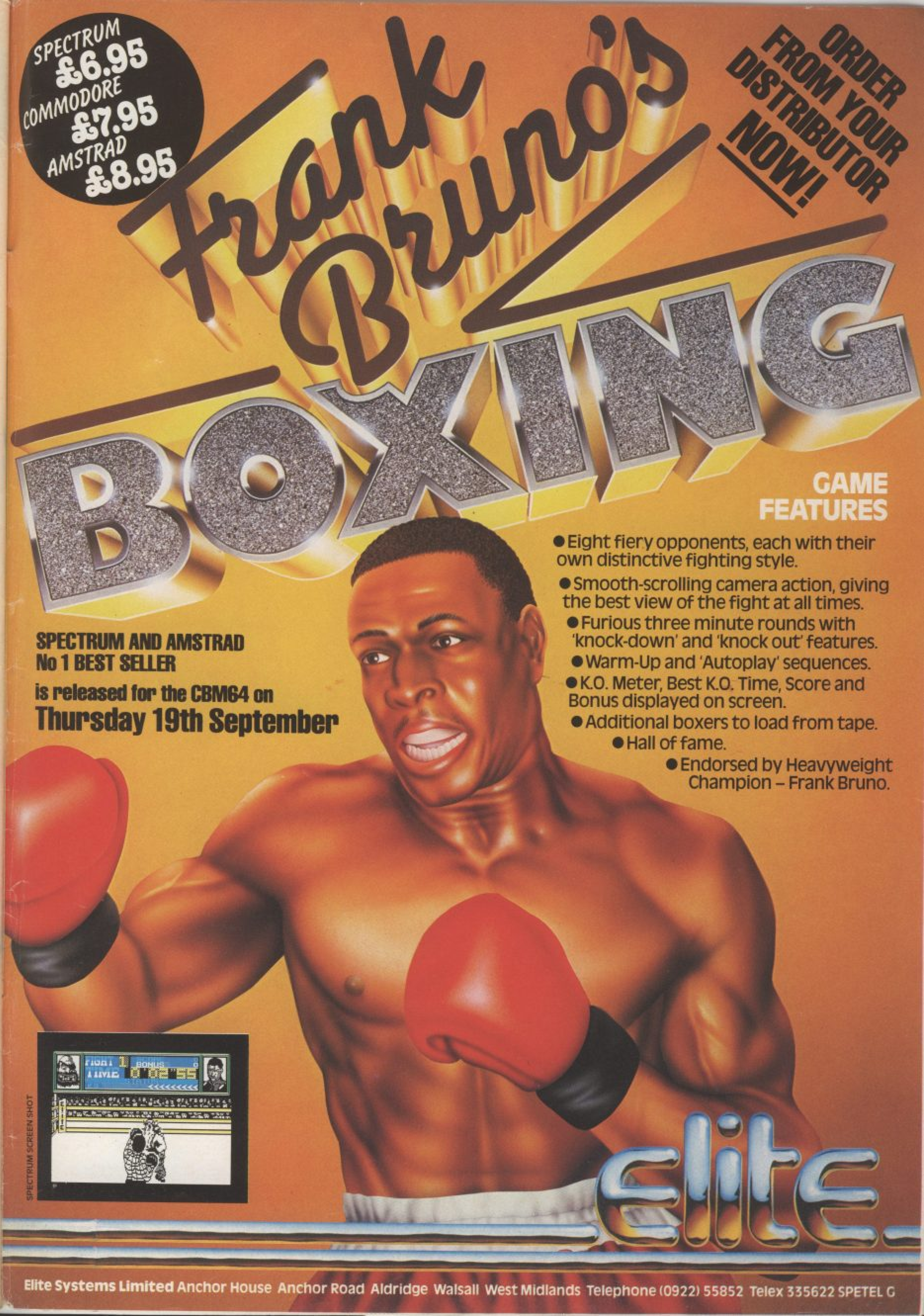
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